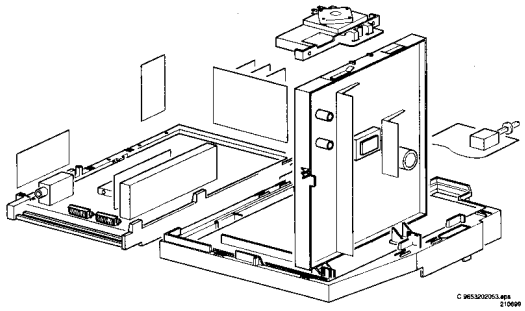
Colour Television

Chassis

MG3.1E

AA

Service
Service
Service



Service Manual

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PHILIPS

1. Technical specifications

1.1 Specifications

1.1.1 Reception

Tuning system	:	100 fold PLL
Colour tranmission systems	:	
Off-air:	:	/05, /19, /12, /58
	:	PAL B/G/I/+
	:	SECAM B/G/L/L'
	:	SECAM D/K
A/V connections	:	PAL B/G
	:	PAL I (UK only)
	:	SECAM B/G
	:	NTSC video play-back
Channel selections	:	120 channels VHF, UHF, S-Channels, Hyperband
Frequency range	:	(47.25-855.25MHz)
Aerial input	:	75Ω (Coax)
VCR preselections	:	0; 90-99
frequency / Channel selection	:	(Germany, Austria and Benelux only

1.1.2 Miscellaneous

Mains voltage	:	220V-240V (10%); 50-60Hz (5%)
Ambient temperature	:	+5 / +45 degrees Celcius
Standby Power Consumption	:	0.3W

1.2 Specification of the terminal sockets

1.2.1 Front connections

TOP CONTROL FL7/FL8 STYLING

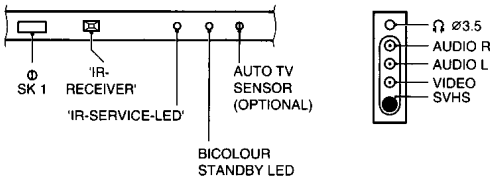


Figure 1-1

Audio / video

- - Video	1Vpp/75Ω	
- - Audio	L(0.5Vrms ≥ 10kΩ)	
- - Audio	R(0.5Vrms ≥ 10kΩ)	
- - Headphone	(32-600Ω 10µΩ)	

SVHS

1 -	gnd	
2 -	gnd	
3 - Y	(1Vpp; 75Ω)	
4 - C	(0.3Vpp; 75Ω)	

1.2.2 Rear connections

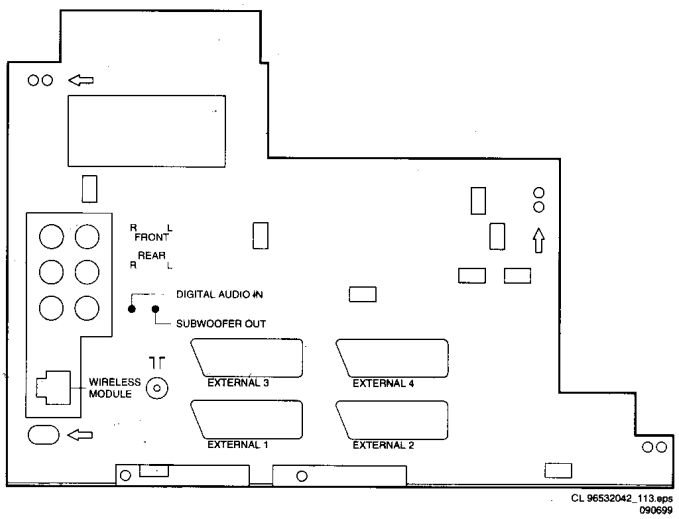
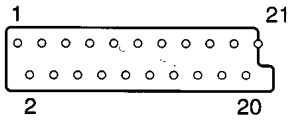


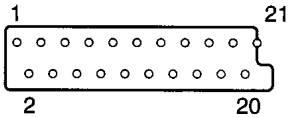
Figure 1-2

External 1 (in/out): RGB+CVBS



1 - Audio	R(0.5Vrm ≤1kΩ)	
2 - Audio	R(0.5Vrm ≥10kΩ)	
3 - Audio	L(0.5Vrm ≤1kΩ)	
4 - Audio	gnd	
5 - Blue	gnd	
6 - Audio	L(0.5Vrm ≥10kΩ)	
7 - Blue	(0.7Vpp/75Ω)	
8 - CVBS-status	0-1.3V:INT 4.5-7V:EXT 16:9 9.5-12V:EXT 4:3	
9 - Green	gnd	
10-		
11- Green	(0.7Vpp/75Ω)	
12-		
13- Red	gnd	
14- RGB-status	gnd	
15- Red	(0.7Vpp/75Ω)	
16- RGB-status	0-0.4V:INT 1-3V:EXT/75Ω	
17- CVBS	gnd	
18- CVBS	gnd	
19- CVBS	(1Vpp/75Ω)	
20- CVBS	(1Vpp/75Ω)	
21- Earth	gnd	

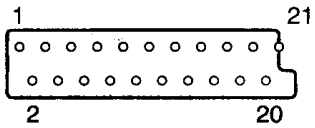
External 2 (in/out): SVHS+RGB+CVBS (intended for VCR.)



1 - Audio	R(0.5Vrm ≤1kΩ)	
2 - Audio	R(0.5Vrm ≥10kΩ)	
3 - Audio	L(0.5Vrms 1kΩ)	

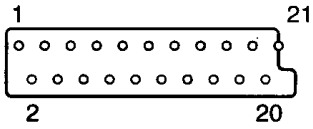
4 - Audio	gnd	⊥
5 - Blue	gnd	⊥
6 - Audio	L(0.5Vrm ≥10kΩ)	⊕
7 - Blue/Chroma out	(0.7Vpp/75Ω)	⊕
8 - CVBS-status	0-1.3V:INT 4.5-7V:EXT 16:9 9.5-12V:EXT 4:3	
9 - Green	gnd	⊥
10-	Easy link	
11- Green	(0.7Vpp/75Ω)	⊕
12-		
13- Red	gnd	⊥
14- RGB-status	gnd	⊥
15- Red/Chroma in	(0.7Vpp/75Ω)	⊕
16- RGB-status	0-0.4V:INT 1-3V:EXT/75Ω	
17- CVBS	gnd	⊥
18- CVBS	gnd	⊥
19- Y/CVBS	(1Vpp/75Ω)	⊕
20- Y/CVBS	(1Vpp/75Ω)	⊕
21- Earth	gnd	⊥

External 3 (in): CVBS+Audio



1 -		
2 - Audio	R(0.5Vrm ≥10kΩ)	⊕
3 -		
4 - Audio	gnd	⊥
5 -		
6 - Audio	L(0.5Vrm ≥10kΩ)	⊕
7 -		
8 - CVBS-status	0-1.3V:INT 4.5-7V:EXT 16:9 9.5-12V:EXT 4:3	
9 -		
10-		
11-		
12-		
13-		
14-		
15-		
16-		
17-		
18- CVBS	gnd	⊥
19-		
20- Y/CVBS	(1Vpp/75Ω)	⊕
21- Earth	gnd	⊥

External 4 (in): CVBS+Audio



1 -		
2 - Audio	R(0.5Vrms ≥10kΩ)	⊕
3 -		
4 - Audio	gnd	⊥
5 -		
6 - Audio	L(0.5Vrms ≥10kΩ)	⊕
7 -		
8 - CVBS-status	0-1.3V:INT 4.5-7V:EXT 16:9 9.5 12V:EXT 4:3	
9 -		
10-		
11-		
12-		
13-		
14-		
15-		
16-		
17-		
18- CVBS	gnd	⊥
19-		
20- Y/CVBS	(1Vpp/75Ω)	⊕
21- Earth	gnd	⊥

1.3 PWB-location drawing

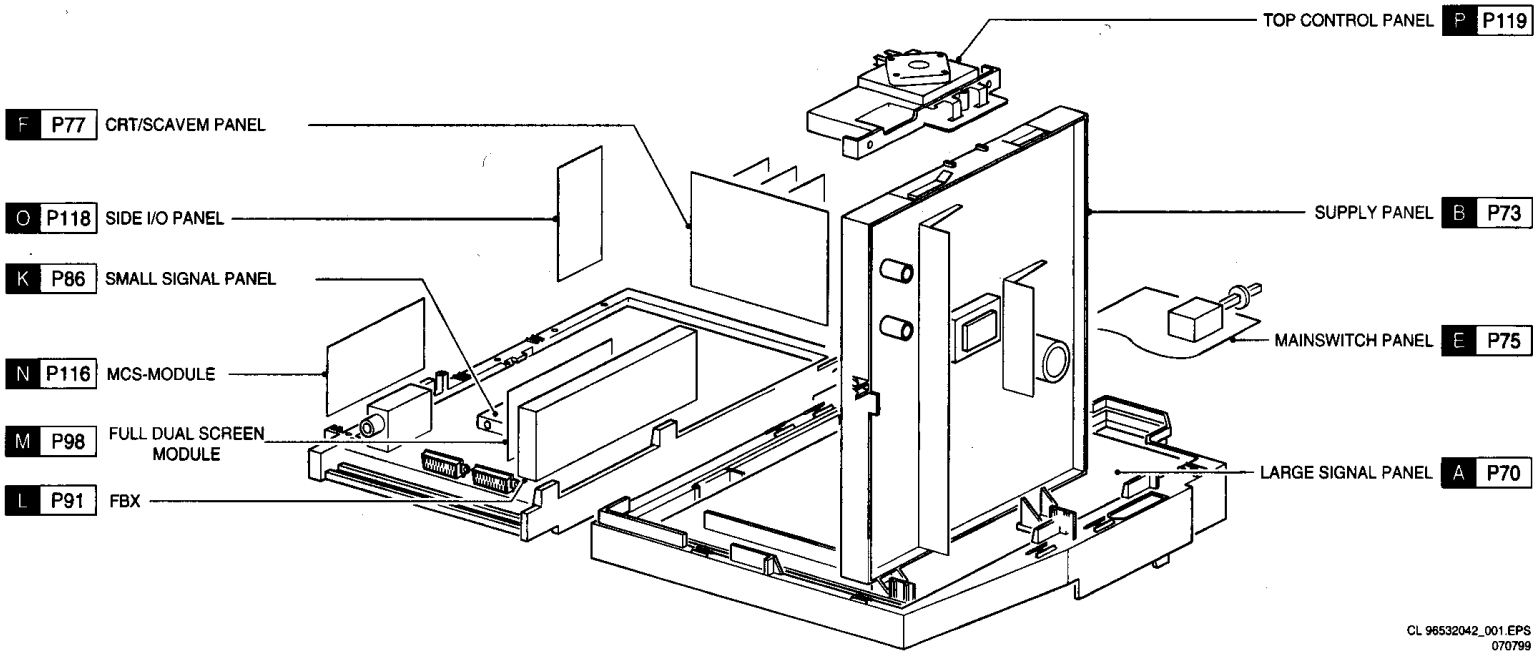


Figure 1-3

2. Safety instructions, Maintenance instruction, Warnings and Notes

2.1 Safety instructions for repairs ⚠

1. Safety regulations require that during a repair:
   - The set should be connected to the mains via an isolating transformer;
   - Safety components, indicated by the symbol ⚠, should be replaced by components identical to the original ones;
   - When replacing the CRT, safety goggles must be worn.
2. Safety regulations require that after a repair the set must be returned in its original condition. In particular attention should be paid to the following points.
   - As a strict precaution, we advise you to resolder the solder joints through which the horizontal deflection current is flowing, in particular ('general repair instruction'):
     - All pins of the line output transformer (LOT);
     - Fly-back capacitor(s);
     - S-correction capacitor(s);
     - Line output transistor;
     - Pins of the connector with wires to the deflection coil;
     - Other components through which the deflection current flows.
     - Note:
     - This resoldering is advised to prevent bad connections due to metal fatigue in solder joints and is therefore only necessary for television sets older than 2 years.
   - The wire trees and EHT cable should be routed correctly and fixed with the mounted cable clamps.
   - The insulation of the mains lead should be checked for external damage.
   - The mains lead strain relief should be checked for its function in order to avoid touching the CRT, hot components or heat sinks.
   - The electrical DC resistance between the mains plug and the secondary side should be checked (only fo sets which have a mains isolated power supply). This check can be done as follows:
     - Unplug the mains cord and connect a wire between the two pins of the mains plug;
     - Set the mains switch to the "on" position (keep the mains cord unplugged!);
     - Measure the resistance value between the pins of the mains plug and the metal shielding of the tuner or the aerial connection on the set. The reading should be between 4.5 Ω and 12 MΩ
     - Switch off the TV and remove the wire between the two pins of the mains plug.
   - The cabinet should be checked for defects to avoid touching of any inner parts by the customer.

2.2 Maintenance instruction

It is recommended to have a maintenance inspection carried out by a qualified service employee. The interval depends on the usage conditions:

- When the set is used under normal circumstances, fo example in a living room, the recommended interval is 3 to 5 years.
- When the set is used in circumstances with higher dust, grease or moisture levels, for example in a kitchen, the recommended interval is 1 year.
- The maintenance inspection contains the following actions:
  - Execute the above mentioned 'general repair instruction'.
  - Clean the power supply and deflection circuitry on the chassis.
  - Clean the picture tube panel and the neck of the picture tube.

2.3 Warnings

1. ESD
2. All ICs and many other semiconductors are susceptible to electrostatic discharges (ESD). Careless handling durin repair can reduce life drastically. When repairing, make sure that you are connected with the same potential as the mass of the set by a wristband with resistance. Keep components and tools also at this same potential.
3. Available ESD protection equipment:
   - Complete kit ESD3 (small table mat, Wristband, Connection box, Extension cable and Earth cable) 4822 310 10671
   - Wristband tester 4822 344 13999
4. In order to prevent damage to ICs and transistors, all high-voltage flashovers must be avoided. In order to prevent damage to the picture tube, the method shown in Fig. 2-4 should be used to discharge the picture tube. Use a high-voltage probe and a multimeter (position DC-V). Discharge until the meter reading is 0V (after approx. 30s).
5. Together with the deflection unit and any multipole unit, the flat square picture tubes used form an integrated unit. The deflection and the multipole units are set optimally at the factory. Adjustment of this unit during repair is therefore not recommended.
6. Be careful during measurements in the high-voltage section and on the picture tube.
7. Never replace modules or other components while the unit is switched on.
8. When making settings, use plastic rather than metal tools. This will prevent any short circuits and the danger of a circuit becoming unstable.
9. Wear safety goggles during replacement of the picture tube.

2.4 Notes

The direct voltages and oscillograms should be measured with regard to the tuner earth (⊥), or hot earth (⊥ϟ) as this is called.
The direct voltages and oscillograms shown in the diagrams are indicative and should be measured in the Service Default Mode (see chapter 5) with a colour bar signal and stereo sound (L:3 kHz, R:1 kHz unless stated otherwise) and picture carrier at 475.25 MHz.
Where necessary, the oscillograms and direct voltages are measured with ⊤⊤) and without aerial signal (⊁⊀). Voltages in the power supply section are measured both for normal operation (◑) and in standby (⏻). These values are indicated by means of the appropriate symbols.
The picture tube PWB has printed spark gaps. Each spark ga is connected between an electrode of the picture tube and th Aquadag coating.
The semiconductors indicated in the circuit diagram and in the parts lists are completely interchangeable per position with the semiconductors in the unit, irrespective of the type indication on these semiconductors.

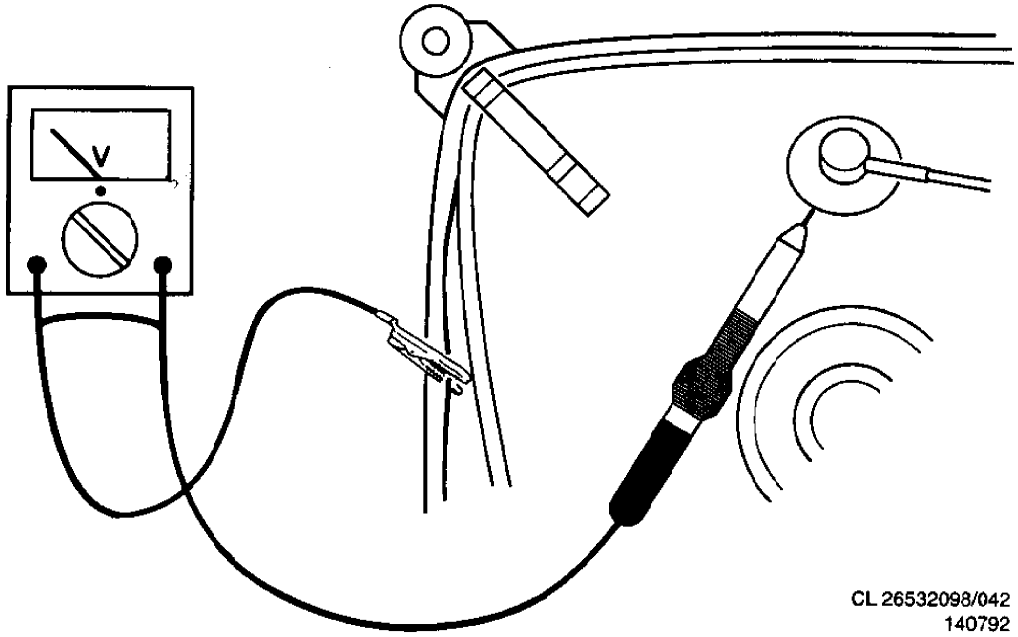


Figure 2-4

4. Mechanical instructions

4.1 Removing the attached Wireless Surround transmitter box at the rear of the set

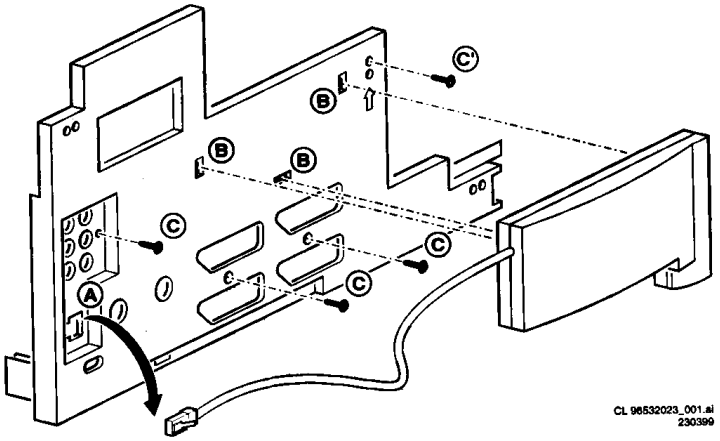
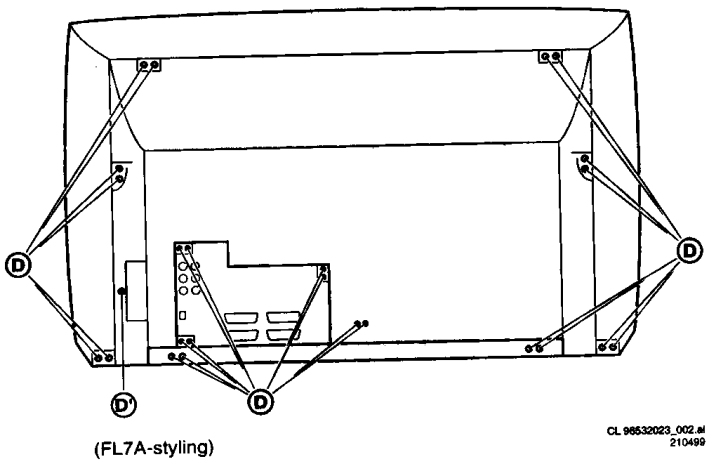


Figure 4-5

1. Remove the cable of the Wireless Surround Transmitter box at location A (see figure 4-5). At the left side of this plug there is the release-hook of the lock-mechanism.
2. Pull the Wireless Surround Transmitter box backwards. It will release from 3 clicks B.
3. Remove the 4 fixation screws (C and C') of the I/O-cover plate. Take care the screw C' is somewhat hidden. Therefore also a visible arrow is placed underneath the screw-hole to emphasise this.

4.2 Removing the rear cover & I/O-cover plate



(FL7A-styling)

Figure 4-6

1. Remove the fixation screws (D) of the rear cover (see figure 4-6). Notice also the screw D' for the side-I/O.
2. Remove the rear cover
3. The I/O-cover plate can easily be removed. On the left side there is a release hook, at the right side there is a hinge-construction. (see figure 4-7).

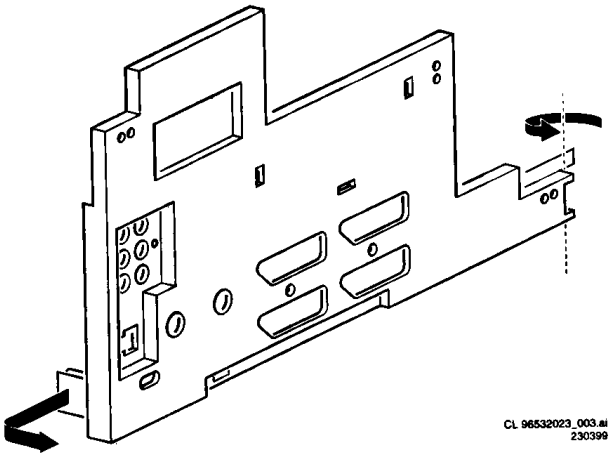


Figure 4-7

4.3 Removing the subwoofer box from the bottom plate

1. First disconnect the faston plugs at the top of the subwoofer.
2. The subwoofer has 2 rubber feet at the bottom side. Behind these feet there is a snap hook. This must be pulled backwards. Now the subwoofer can be moved upwards.

4.4 Removing module support bracket of the Small Signal Panel

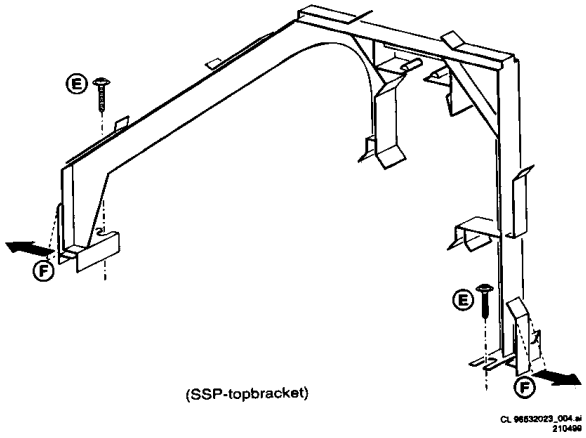


Figure 4-8

1. Remove the 2 fixation screws (E) (see figure 4-8).
2. Pull snap-hooks (F) to the outside direction and remove the bracket. The left snap-hook is somewhat difficult to release, but with some effort it is possible to release it by manipulating the hook with a finger underneath the MCS module at the left hand side.

4.5 Removing the top bracket of the Large Signal Panel

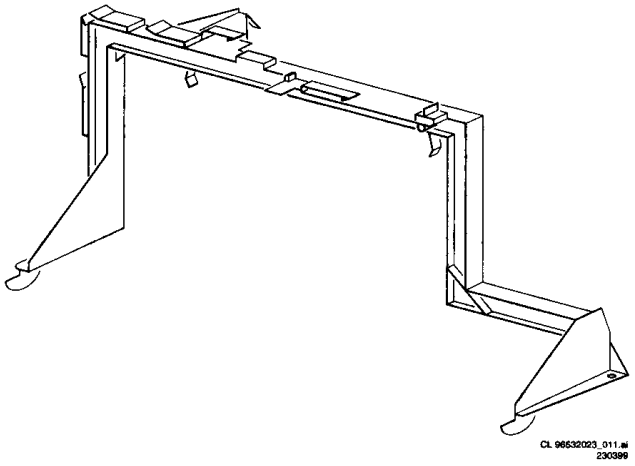


Figure 4-9

1. Remove the 2 fixation screws.
2. This bracket can only be removed, when the supply panel, besides the LSP, is removed.

4.6 Service positions

There are several predefined service positions:
- Service position 1 for both the chassis panels (component-side SSP, LSP, supply)
- Service position 2 for the MCS module
- Service position 3 for the Supply panel (copper-side
- Service position 4 for the LSP and Supply panel (copper-sides)

4.6.1 Service position 1 for both the chassis panels componen side

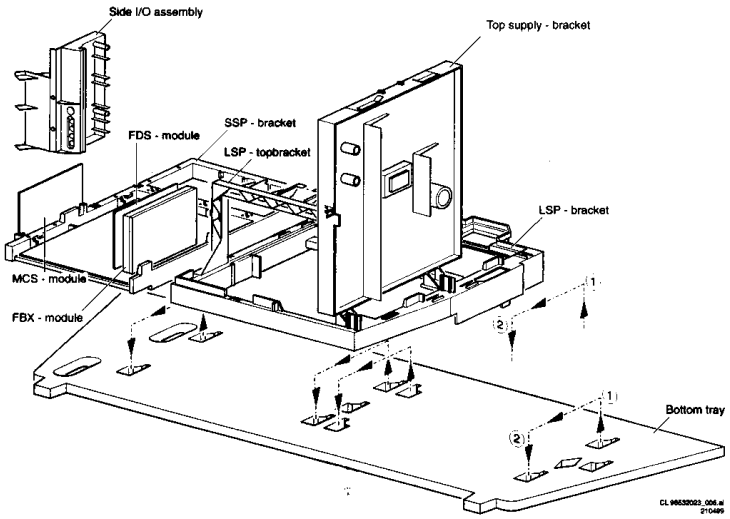


Figure 4-10

1. Pull the SSP- and LSP assembly backwards, about 8 c (see figure 4-10). The brackets are not fixed to each other, but can be repositioned backwards, as if they were one bracket.
2. Hook the brackets in the first row of fixation-holes of the bottom tray. In other words re-position the fixation from (1) to (2).
3. This position is meant for servicing the SSP. All service test points are accessible at the top side of this panel.

4.6.2 Service position 2 for the MCS module

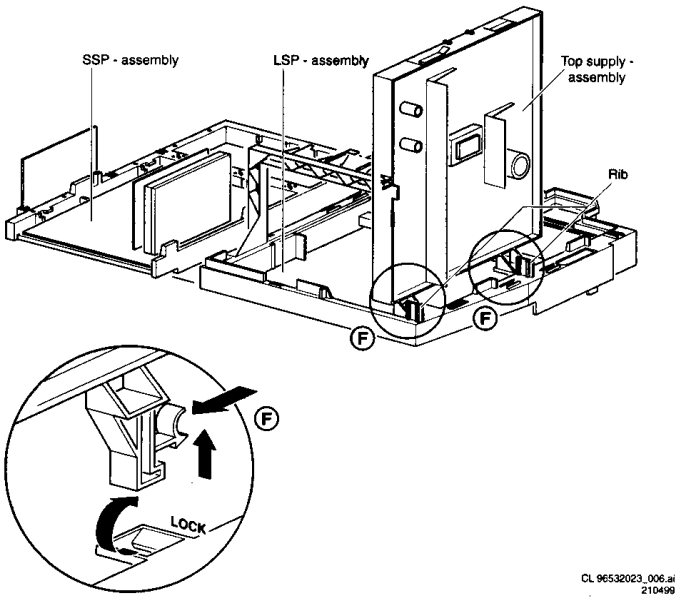


Figure 4-11

1. In this position the MCS module can be serviced from th copper side (left hand side) (see figure 4-11).
2. When one wants to have access to the other side of the board (reflow-side), one must first release the snap construction at the bottom side of the MCS module. This can be achieved the best, by releasing the hook with a screwdriver approaching it from the rear.
3. The board can be rotated new about 220 degrees clockwise (hinged by the connectors). The MCS module can support on the SSP bracket. It can even be shifted in a wire-cable hook. All reflow components and test points on this side are accessible now.

4.6.3 Service position 3 for the Supply panel (copper-side

1. Release the Supply assembly out of the LSP assembly (see figure 4-11). This can be done by pulling both the release hooks (F) of the Supply bracket backwards. After a click (release), the Supply bracket can be lifted.
2. After lifting the Supply assembly, it must be rotated 90 degrees clockwise, in such a way that the copper-side will be on top (before doing this, release the wire cables from the wire-fixations, disconnect the wire cable 0390 coming from the rotation-coil (if valid)).
3. The 2 support-posts of the Supply assembly have 2 slots, that can be placed over 2 ribs that are available on the right side of the LSP bracket.
4. The copper side of the Supply panel with its service test points is available now. (see figure 4-12)

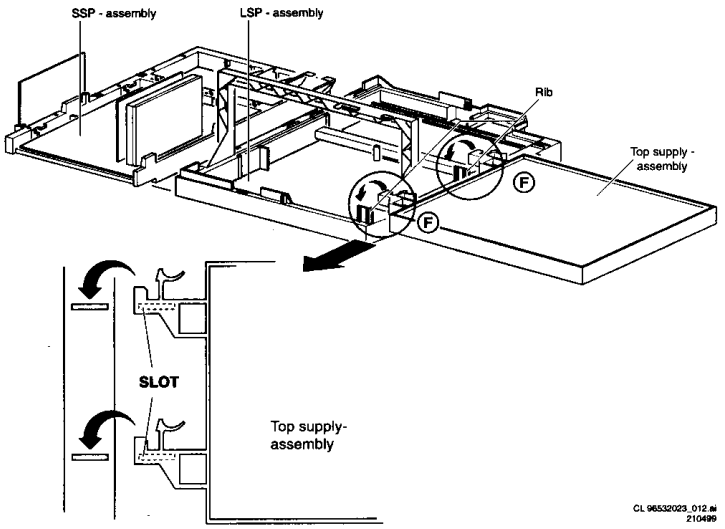


Figure 4-12

4.6.4 Service position 4 for the LSP and Supply panel (copper sides

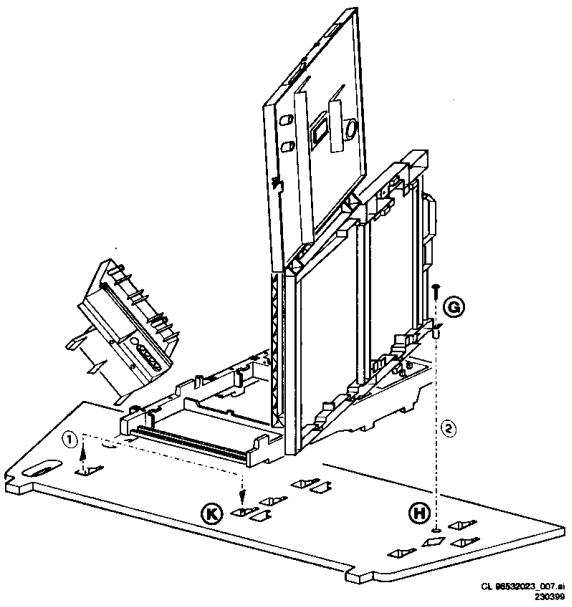


Figure 4-13

1. First reinforce the Supply assembly fixation with the LSP bracket with a screw. (see figure 4-13
2. Now move as well the SSP bracket and LSP bracket about 25 cm to the right.
3. Rotate the complete LSP/Supply assembly 90 degrees, such that snaphook (G) is placed into hole (H). If needed this construction can be reinforced with a screw (see figure 4.13).
4. At this moment one can measure all the service test points of the LSP on the right hand side and of the Supply panel at the left hand side.
5. The left front hook of the SSP bracket can be shifted in the right SSP hole (see K; of service position 1) of the botto plate

4.7 Removing the SSP from the SSP bracket

1. Release the 3 fixation clamps on the right hand side of the bracket.
2. Press the board upwards and remove the board from the bracket.

4.8 Removing the Supply panel from the Supply bracket

1. Remove the 4 fixation screws
2. Release the 2 top-corner snap-constructions by forcing them outwards
3. The panel hinges at the bottom. When the vertical sides of the bracket are forced somewhat outwards, the pcb can b removed.

4.9 Removing the LSP from the LSP-bracket

1. Remove the centre fixation screw on the top side of the panel
2. The panel is hinged at the left side. On the right side and the rear side the panel has release-hooks
3. The pcb can be removed now.

4.10 Removing the top control board

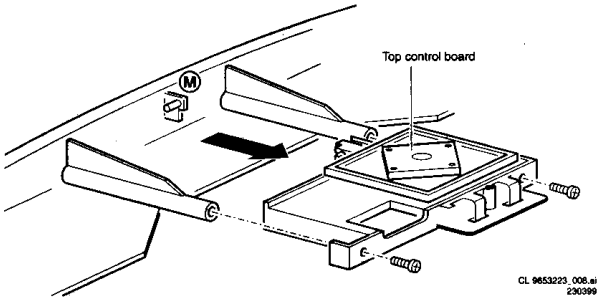


Figure 4-14

1. Remove the 2 screws (see figure 4-14)
2. Pull the top control assembly backwards with some force. It is catched by the front 'hinge' (see M).

4.11 Removing the side-I/O board

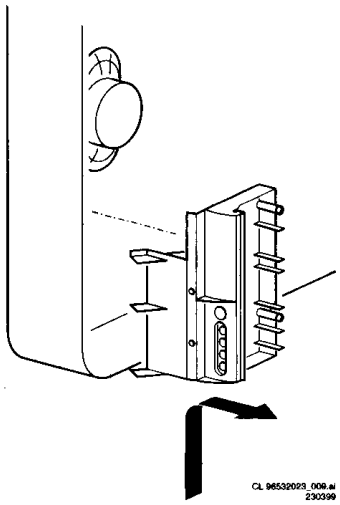


Figure 4-15

1. The complete Side-I/O assembly can be lifted out of the hinges and placed on the bottom plate of the set (see fig 4-15)
2. The board can easily be removed out of the bracket by releasing the fixation clamps.

4.12 Removing the mains switch/LED board

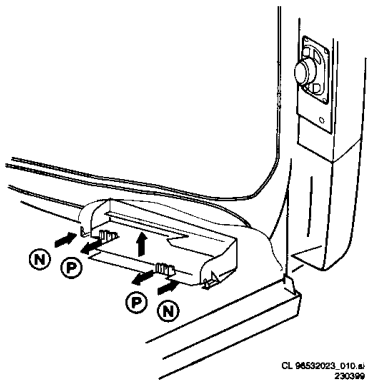


Figure 4-16

1. Release the two fixation clamps (N) by forcing them up (see figure 4-16). At the same time the complete assy (mains unit bracket + pcb) must be pulled backwards.
2. If the light guide was or has become defective this can be replaced now
3. The Mains switch/led board can be removed now by releasing the clamps (P) of the bracket.

4.13 Mounting the rear cover

Before mounting the rear cover, check whether the mains cord is mounted correctly in the guiding brackets.

5. Service modes, faultfinding and repair tips

In this chapter the following paragraphs are included:
5.1 Test points
5.2 Service modes and Dealer Service Tool and ComPair (including fault finding tips related to CSM-mode)
5.3 Error codes
5.4 Protections
5.5 Faultfinding trees

5.1 Test points

The MG3.1E chassis is equipped with test points in the service printing. These test points are referring to the functional blocks:

- A1-A2-A3, etc. on Small Signal Panel: Test points for the audio processing circuitry.
- A1-A2-A3, etc. on Large Signal Panel: Test points for the audio amplifiers.
- B1-B2-B3, etc: Test points for the power supply.
- C1-C2-C3, etc: Test points for the control circuitry.
- F1-F2-F3, etc. on Large Signal Panel: Test points for the frame output circuitry.
- F1F-F2F-F3F, etc. on CRT/Scavem Panel: Test points for the CRT-panel circuitry.
- F1K-F2K-F3K, etc on Small Signal Panel: Test points for the frame drive.
- I1-I2-I3, etc: Test points for the Tuner/IF part.
- L1-L2-L3, etc: Test points for the line drive and line output circuitry
- M1-M2-M3, etc: Test points on FDS-module
- N1-N2-N3, etc: Test points on MCS-module.
- R1-R2-R3, etc: Test points on Surround Transmitter module.
- S1-S2-S3, etc: Test points for the synchronisation circuitry.
- T1-T2-T3, etc: Testpoints for the teletext circuitry.
- U1-U2-U3, etc: Test points on Surround Receiver module.
- V1-V2-V3, etc: Test points for the video processing circuitry.
- W1-W2-W3, etc: Test points on Surround Amplifier, Supply..

The numbering is done in a for diagnostics logical sequence; always start diagnosing within a functional block in the sequence of the relevant test points for that functional block.

5.2 Service modes, Dealer Service Tool and ComPair

For easy installation and diagnosis the dealer remote control RC7150 is introduced. The RC7150 can be used for all new TV sets, including all set of the MG3.1E chassis. The RC7150 is also called Dealer Service Tool or DST. The ordering number of the DST (RC7150) is 4822 218 21232.

5.2.1 Installation features for the dealer

The dealer can use the RC7150 for programming the TV-set with presets. 10 Different program tables can be programmed into the DST via a TV-set (downloading from the GFL, MD2, MG2.1 or MG3.1 to the DST; see GFL, MD2, MG2.1 and MG3.1 service manuals) or by the DST-I (DST interface; ordering code 4822 218 21277).
For explanation of the installation features of the DST, the directions for use of the DST (4822 727 20073) are recommended (for the MG3.1E chassis, download code 4 should be used).

5.2.2 Diagnose features for the servicer

The MG3.1E sets can be put in the two service modes via the DST RC7150. These are the Service Default Mode (SDM) and the Service Alignment Mode (SAM). The SDM and SAM can also be entered by short circuiting the relevant pins on the SSP.

Service Default Mode (SDM
Specification of the SDM:
- Tuning frequency 475.25 MHz.
- TV-system for BGLM sets set to BG, for BGLL'I sets to LL'.
- All picture settings at 50% (brightness, colour, contrast, HUE).
- All sound settings at 50% except volume at 25% (so bass, treble, balance at 50%, volume at 25%).
- All service-unfriendly modes are disabled (like sleep timer, child lock, blue mute).

Entering the SDM can be done in 3 ways:
- By the "DEFAULT" key on the DST while the set is in the normal operation mode.
- By ComPair (see the instruction book of ComPair).
- By short-circuiting for a moment the two pins (pin 2 and 3 of connector 0356) on the component side of the SSP wit the indication "SDM" (activation can be performed in all

modes except when the set has a problem with the main-processor).

Note: If the SDM is entered via the pins, all the protections are de-activated.

Exiting the SDM can only be done via the STANDBY command. By switching off-on the set with the mains switch the MG3.1E will come up again in the SDM.

Service Alignment Mode (SAM)

Specification of the SAM:

- Software alignments (see chapter 8).
- Option settings (see chapter 8).
- Error buffer reading and erasing. The most recent error code is displayed on the left side.
- Operation counter.
- Software version.

Entering the SAM can be done in 3 ways:

- By the ALIGN-button on the DST while the set is in the normal operation mode (or SDM). Enter the password '3-1-4-0' and press OK.
- By ComPair (see the instruction book of ComPair).
- By short-circuiting for a moment the two pins (pin 1 and 2 of connector 0356) on the component side of the SSP with the indication "SAM" (activation can be performed in all modes except when the set has a problem with the microprocessor).

Note: If the SAM is entered via the pins, all protections are de-activated.

Exiting the SAM can be done via the MENU command or via switching off-on the set with the mains switch.

Customer Service Mode (CSM)

All MG3.1E sets are equipped with the 'Customer Service Mode' (CSM). This 'Customer Service Mode' is a special service mode which can be activated and deactivated by the customer upon request of the service technician/dealer during a telephone conversation in order to identify the status of the set. This CSM is a 'read only' mode, therefore modifications i this mode are not possible.

Switching-on of the Customer Service Mode

The Customer Service Mode will switch-on after pressing simultaneously the "MUTE" knob on the remote control handset and the "MENU" button on the TV for at least 4 seconds. This activation only works if there is no menu on the screen.

Switching-off the Customer Service Mode

The Customer Service Mode will switch-off after pressing any key of the remote control handset (with exception of the "cursor-up", "cursor-down", "P+" and "P-" keys), or the buttons on the TV or by switching off the TV set with the mains switch. By means of the "P+" and "P-" keys switching between different presets is possible.

Detailed explanation of the Customer service Mode

After switching on the Customer Service Menu the following screen will appear:

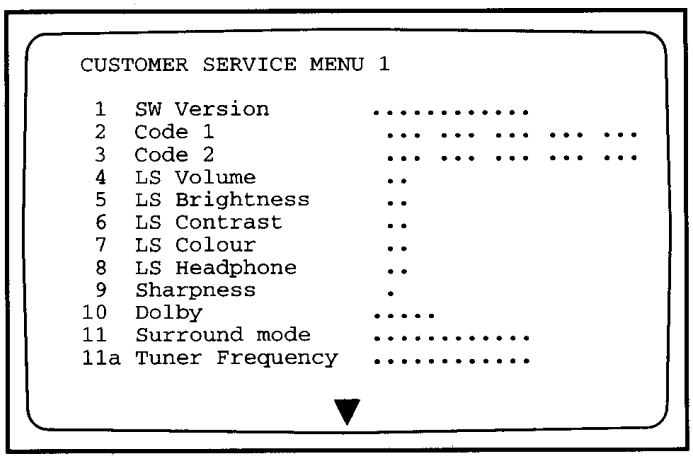

CUSTOMER SERVICE MENU 1
1 SW Version .....
2 Code 1 ... ...
3 Code 2 ... ...
4 LS Volume ..
5 LS Brightness ..
6 LS Contrast ..
7 LS Colour ..
8 LS Headphone ..
9 Sharpness .
10 Dolby .....
11 Surround mode .....
11a Tuner Frequency .....

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Figure 5-17

- Line 1:
  Software version; the build in software version (AAAABCX.Y
  - AAAA= MG31(chassis name)
  - B = E (Europe)
  - C = 1 (language cluster)
  - X = main version number
  - Y = sub version number

  Details on the software version can be found in the chapter "Software Survey" of the publication "Product Survey - Colour Television".
- Line 2:
  Code 1; gives the last 5 errors of the error buffer. As soon as the built-in diagnose software has detected an error the buffer is adapted.
- Line 3:
  Code 2; gives the first 5 errors of the error buffer. As soon as the built-in diagnose software has detected an error the buffer is adapted.
  The last occurred error is displayed on the leftmost position of code 2. Each error code is displayed as a 3 digit number. When less than 10 errors occur, the rest of the line(s is(are) empty. In case of no errors the text "No Errors" is displayed. See paragraph 5.3 of this chapter for a description of the error codes.
- Line 4:
  LS Volume; gives the Last Status of the volume as set by the customer for this selected transmitter. The value ca vary from 0 (volume is minimum) to 24 (volume is maximum). Volume values can be changed via the volume key on the remote control handset.
- Line 5:
  LS Brightness; gives the Last Status of the brightness as set by the customer for this selected transmitter. The value can vary from 0 (brightness is minimum) to 63 (brightness is maximum). Brightness values can be changed via the "cursor left" and "cursor right" keys on the remote control handset after pressing the "menu" button and selecting "picture" and "brightness".
- Line 6:
  LS Contrast; gives the Last Status of the contrast as set by the customer. The value can vary from 0 (contrast is minimum) to 63 (contrast is maximum). Contrast values can be changed via "cursor left" and "cursor right" keys on the remote control handset after pressing the "menu" button and selecting "picture" and "contrast".
- Line 7:
  LS Colour; gives the Last Status of the colour saturation, as set by the customer. The value can vary from 0 (colour is minimum) to 63 (colour is maximum). Colour values can be changed via "cursor left" and "cursor right" keys on the

remote control handset after pressing the "menu" button and selecting "picture" and "colour".

- Line 8:
  LS Headphone; gives the Last Status of the headphone volume, as set by the customer. The value can vary from 0 (volume is minimum) to 24 (volume is maximum).
  Headphone volume values can be changed via the "cursor left" and "cursor right" keys on the remote control handset after pressing the "menu" button and selecting "sound" and "headphone".
- Line 9:
  Sharpness; gives the sharpness value.
  The value can vary from 0 (sharpness is minimum) to 7 (sharpness is maximum). In case of bad antenna signals a too high value of the sharpness can result in a noisy picture. Sharpness values can be changed via the "cursor left" and "cursor right" keys on the remote control handset after pressing the "menu" button and selecting "picture" and "sharpness".
- Line 10:
  Dolby; indicates whether the received transmitter transmits Analog Dolby, Digital Dolby or no Dolby. This is represented in the display by "Prologic", "Digital" or "None".
  Attention: The presence of Dolby can only be tested by the software on the Dolby signalling bit. If a Dolby transmisssion is therefore received without a Dolby signalling bit, then this indicator will show "None" even though such a Dolby transmission is received.
- Line 11:
  Surround Mode; indicates the by the customer selected surround mode. In case the set is a Non-Dolby set there will be displayed "0". If it is a Dolby-set then is displayed: "Stereo", "3Dsurround", "Pro Logic", "DD (digital dolby), "Front3Stereo", "Hall" or "Off". For Dolby-set surround mode can be changed via the "cursor left" and "cursor right" keys on the remote control handset after pressing the "menu" button and selecting "sound" and "Surround settings".
- Line 11a:
  Tuner frequency; indicates the frequency the selected transmitter is tuned to. The tuner frequency can be changed via the "cursur left" and "cursur right" keys for fine tune or by entering directly with the digit keys 0 to 9 on the remote control handset aftre opening the installation menu and selecting "manual installation".
  The installation menu can be opened by presssing "timer" and "enlarge" at the same time.
  By means of the "cursor-down" knob on the remote control handset the Customer Service Menu 2 will appear. By means of the "cursor-up" knob on the remote control handset the Customer Service Menu 1 will appear again.
  Customer Service Menu 2 represents following information:

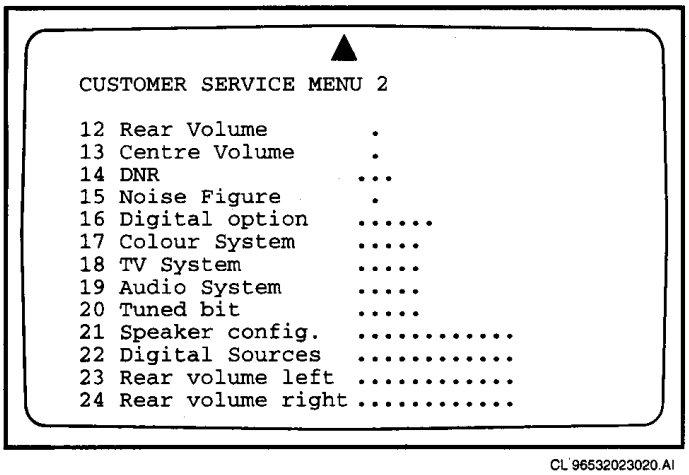
CUSTOMER SERVICE MENU 2
12 Rear Volume .
13 Centre Volume .
14 DNR ...
15 Noise Figure .
16 Digital option .....
17 Colour System .....
18 TV System .....
19 Audio System .....
20 Tuned bit .....
21 Speaker config. .....
22 Digital Sources .....
23 Rear volume left .....
24 Rear volume right .....

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Figure 5-18

- Line 12:
  Rear Volume; gives the volume value of the surround sound loudspeakers. This value can vary from 0 (minimum volume) to 63 (maximum volume).
  Rear volume can be changed via the "cursor left" and "cursor right" keys on the remote control handset after pressing the "menu" button and selecting "sound", "Surround settings" and selecting "Rear volume". This feature is only available when surround mode is in "Dolby Pro Logic" or "Hall".
- Line 13:
  Centre Volume; gives the volume value of the centre loudspeakers.
  This value can vary from 0 (minimum volume) to 63 (maximum volume).
  Centre volume can be changed via the "cursor left" and "cursor right" keys on the remote control handset after pressing the "menu" button and selecting "sound", 'Dolby Pro Logic' and selecting "centre volume". This feature is only available when surround mode is in "Dolby Pro Logic" , "Dolby 3 Stereo" or "3D surround".
- Line 14:
  DNR (Dynamic Noise Reduction); gives the setting of the DNR for the selected transmitter.
  The following selections are possible:
  - "off", "min", "med" or "max"
  - "off" or "automatic" (MG3.1E with "Automatic Noise Reduction").
    The DNR can be changed via the "DNR" key on the remote control handset.
- Line 15:
  Noise Figure; gives the selected noise ratio for this selected transmitter. This value can vary from 0 (good signal) to 127 (average signal) and to 255 (bad signal). This only works in case the DNR selection is "off/ automatic".
- Line 16:
  Digital Option; gives the selected digital mode, "100Hz", Digital Scan" or "Natural Motion".
  Digital option can be changed via the "cursor left" and "cursor right" keys on the remote control handset after pressing the "menu" button and selecting "picture" and "digital options".
- Line 17:
  Colour System; gives information about the colour system of the selected transmitter.
  - Black and white: No colour carrier received
  - PAL: PAL signal received
  - SECAM: SECAM signal received
  - NTSC: NTSC signal received
- Line 18:
  TV System; gives information about the video system of the selected transmitter.
  - BG: BG signal received
  - DK: DK signal received
  - I: PAL I signal received
  - L: SECAM L signals received
  - M38.9: NTSC M signal received with video carrier on 38.9 MHz
  - MN: NTSC M signal received
- Line 19:
  Audio System; gives information about the audio system of the selected transmitter.
  - Mono: Mono sound received
  - Stereo: Stereo sound received
  - Dual I: Language I received
  - Dual II: Language II received
  - Digital Mono: Digital mono sound is received
  - Digital Stereo: Digital stereo sound is received
  - Digital Dual I: Digital language I is received
  - Digital Dual II: Digital language II is received
- Line 20:

Tuned Bit; gives information about the tuning method of the stored preset. If the value is "On" the preset is stored via manual entry of the frequency when a transmitter was not present on that frequency. In that case the TV will attempt to perform a micro-search every time the preset number is selected. Once the micro-search has been successful the Tuned Bit will be set to "Off".

- Line 21:
  Speaker configuration; gives the configuration setting for the speakers. In case the set is a Non-Dolby set there will be displayed "0". If it is a Dolby-set then is displayed: "Full internal", "L/R external", "Surround external" or "Full external". For the Dolby-set the speaker configuration can be changed via the "cursor left" and "cursor right" keys on the remote control handset after opening the installation menu and selecting "set-up". The installation menu can be opened by pressing "timer" and "enlarge" at the same time.
- Line 22:
  Digital Sources; gives the configuration setting for the digital source. This can be "Front", "Ext1", "Ext1+Dig.Audio", "Ext2", "Ext3", "Ext4" or "None". If one of these is selected the starting point is a top quality signal on that input and a number of settings are therefore changed automatically. The digital source can be changed via the "cursor left" and "cursor right" keys on the remote control handset after opening the installation menu and selecting "set-up". The installation menu can be opened by pressing "timer" and "enlarge" at the same time.
- Line 23:
  Rear Volume Left (only valid when dolby digital option is 'on'); gives the volume value of the left surround sound loudspeaker. This value can vary from 0 (minimum volume) to 63 (maximum volume).
  Rear volume left can be changed via the "cursor left" and "cursor right" keys on the remote control handset after pressing the "menu" button and selecting "sound", "Surround settings" and selecting "Rear volume left".
- Line 24:
  Rear Volume Right (only valid when dolby digital option is 'on'); gives the volume value of the right surround sound loudspeaker. This value can vary from 0 (minimum volume) to 63 (maximum volume).
  Rear volume right can be changed via the "cursor left" and "cursor right" keys on the remote control handset after pressing the menu button and selecting "sound", "Surround settings" and selecting "Rear volume right".

Problems and solving tips

The procedures to change the value or the status of the different settings is described in the paragraph 'Detailed explanation of the Customer Service Mode'.

Picture problems

Worse picture quality in case of pictures of digital sources. (e.g. DVD)
Check line 22 "Digital sources". Line 22 will give the indication "Front", "Ext1", "Ext1+dig.Audio", "Ext2", "Ext3', "Ext4" or "None". Check if the digital source is really connected to the indicated external input. If not change the setting into correct external input.

Snowy/noisy picture

1. Check line 15 "Noise Figure". In case the value is 127 or higher and the value is also high on other programs check the aerial cable/aerial system.
2. Check lines 9 "Sharpness", 14 "DNR" and 15 "Noise Figure". In case the value of line 9 is 3 or 4 and the value of line 15 is high (127 or higher), lower the value of line 9 "sharpness" and switch DNR (line 14) to "automatic", "on" or to a higher value.

Picture too dark

1. Press "Smart Picture" button on the Remote Control handset. In case picture improves, raise the brightness value or raise the contrast value. The new value(s) are automatically stored for all TV channels.
2. After switching on the Customer Service Mode the picture is OK. Raise the brightness value or raise the contrast value. The new value(s) are automatically stored for all TV channels.
3. Check lines 6 "LS Brightness" and 7 "LS Contrast". The value of line 6 is low (<10) or the value of line 7 is low (<10). Raise the brightness value or raise the contrast value.

Picture too bright

1. Press "Smart Picture" button on the Remote Control handset. In case picture improves, reduce the brightness value or reduce the contrast value. The new value(s) are automatically stored for all TV channels.
2. After switching on the Customer Service Mode the picture is OK. Reduce the brightness value or reduce the contrast value. The new value(s) are automatically stored for all TV channels.
3. Check lines 6 "LS Brightness" and 7 "LS Contrast". The value of line 6 is high (>40) or the value of line 7 is high (>50). Reduce the brightness value or raise the contrast value.

Fading picture

Digital scan effect. Check line 14 "DNR". The status of "DNR" is 'med' or 'max'. Reduce "DNR" to 'min' or switch off the digital scan.

White line around picture elements and text

1. Press "Smart Picture" button on the Remote Control handset. In case picture improves, reduce the sharpness value. The new value(s) are automatically stored for all TV channels.
2. After switching on the Customer Service Mode the picture is OK. Reduce the sharpness value. The new value(s) are automatically stored for all TV channels.
3. Check line 8 "Sharpness". Reduce the sharpness value. The new value(s) are automatically stored for all TV channels

No picture.

Check line 20 "Tuned bit". In case the value is 'On', install the required program again. Open the installation menu by pressing "timer" and "enlarge" at the same time and perform manual installation.

Blue picture.

No proper signal is received. Check the aerial cable/aerial system.

Blue picture and/or unstable picture.

A scrambled or decoded signal is received.

Black and white picture.

Check line 5 "LS colour". In case the value is low (<10) raise the value of colour. The new value(s) are automatically stored for all TV channels.

No colours/colour lines around picture elements.

1. Check lines 17 "Colour System" and 18 "TV System". In case line 17 is 'PAL' and line 18 is 'M 38,9', the installed system for this preset is 'USA', while 'West Europe' is required. Install the required program again. Open the installation menu by pressing "timer" and "enlarge" at the same time and perform manual installation. Select 'System; West Europe'.

2. In case line 17 is 'PAL' and line 18 is 'L', the installed system for this preset is 'France', while 'West Europe' is required. Install the required program again. Open the installation menu by pressing "timer" and "enlarge" at the same time and perform manual installation. Select 'System; West Europe'.

No colours/noise in picture

1. Check lines 17 "Colour System" and 18 "TV System". In case line 17 is 'Black and White' and line 18 is 'BG', the installed system for this preset is 'West Europe', while 'USA' is required. Install the required program again. Open the installation menu by pressing "timer" and "enlarge" at the same time and perform manual installation. Select 'System; USA'.
2. In case line 17 is 'Black and White' and line 18 is 'L', the installed system for this preset is 'France', while 'USA' is required. Install the required program again. Open the installation menu by pressing "timer" and "enlarge" at the same time and perform manual installation. Select 'System; USA'

Colours not correct.

Check lines 17 "Colour System" and 18 "TV System". In case line 17 is 'PAL' and line 18 is 'L', the installed system for this preset is 'France', while 'West Europe' is required.
Install the required program again. Open the installation menu by pressing "timer" and "enlarge" at the same time and perform manual installation. Select 'System; West Europe'.

Colours not correct/unstable picture.

Check lines 17 "Colour System" and 18 "TV System".
In case line 17 is 'SECAM' and line 18 is 'BG', the installed system for this preset is 'USA', while 'France' is required. Install the required program again. Open the installation menu by pressing "timer" and "enlarge" at the same time and perform manual installation. Select 'System; France'.

Unstable picture.

Check lines 17 "Colour System" and 18 "TV System". In case line 17 is 'SECAM' and line 18 is 'M 38,9', the installed system for this preset is 'West Europe', while 'France' is required.
Install the required program again. Open the installation menu by pressing "timer" and "enlarge" at the same time and perform manual installation. Select 'System; France'.

Menu text not sharp enough.

1. Press "Smart Picture" button on the Remote Control handset. In case picture improves, reduce the contrast value. The new value(s) are automatically stored for all TV channels.
2. After switching on the Customer Service Mode the picture is OK. Reduce the contrast value. The new value(s) are automatically stored for all TV channels.
3. Check line 7 "LS Contrast". The value of line 7 is high (>50). Reduce the contrast value.

Sound problems

No sound from left and right speaker.

1. Press "Smart Sound" button on the Remote Control handset. In case sound improves, raise the volume value. The new value(s) are automatically stored for all TV channels.
2. After switching on the Customer Service Mode the volume is OK. Raise the volume value. The new value(s) are automatically stored for all TV channels.
3. Check line 4 "LS Volume". The value is low. Raise the value of "Volume". The new value(s) are automatically stored for all TV channels.

Sound too loud for left and right speaker.

1. Press "Smart Sound" button on the Remote Control handset. In case sound improves, reduce the volume value. The new value(s) are automatically stored for all TV channels.
2. After switching on the Customer Service Mode the volume is OK. Reduce the volume value. The new value(s) are automatically stored for all TV channels.
3. Check line 4 "LS Volume". The value is high. Reduce the value of "LS Volume". The new value(s) are automatically stored for all TV channels.

No sound from "centre" speaker.

Check line 12 "Centre Volume". The value is low. Raise the value of the "Centre Volume".
In case of a Dolby set check line 11 "Surround mode". The centre speaker is only active in the surround modes 3Dsurround, Prologic, Front3stereo and DD

Sound too loud from "centre" speaker.

Check line 12 "Centre Volume". The value is high. Reduce the value of the "Centre Volume"

No sound from "rear" speakers.

1. Check line 11 "Surround mode". In case line 11 is "Off" or "Hall" change the surroun mode into 3Dsurround, Prologic, Front3stereo or DD.
2. Check line 12 "Rear volume". The value is low. Raise the value of "Rear volume". The new value(s) are automatically stored for all TV channels.
3. Check lines 23 "Rear volume left" and 24 "Rear volume right". The values are low. Raise the values of "Rear volume left" and "Rear volume right". The new value(s) are automatically stored for all TV channels.
4. Check if the surround boxes receives sound, the green led should be on.
5. Check if the right RF-channel is chosen. Look at the bottom of the active box for the RF-channel of the surround speakers. Check the installed RF-channel in the installation menu. If this RF-channel is different change it to the correct one.

Diagnose Mode (only active during transmission of error codes and diagnose 99)

This mode is activated by the DIAGNOSE command on the DST for reading the error codes and erasing the error buffer by the DST even when the set is in protection and so there is no picture (assuming that the power supply and the control part are working). For activation see paragraph 5.3. The diagnose Mode is only a temporarily mode (the set will go back to the previous mode), and can not be switched on permanently.
Note: The diagnose mode can not be entered if the SAM is activated.

ComPair

ComPair (Computer Aided Repair) is a service tool for Philips Consumer Electronics products. ComPair is a further development on the DST service remote control allowing faster and more accurate diagnostics. ComPair has three big advantages:

- ComPair helps you to quickly get an understanding how to repair the MG3.1E in short time by guiding you step by step through the repair procedures.
- ComPair allows very detailed diagnostics (on I2C level) and is therefore capable of accurately indicating problem areas. You do not have to know anything about I2C commands yourself; ComPair takes care of this.
- ComPair speeds up the repair time since it can automatically communicate with the MG3.1E (when the micro processor is working) and all repair information is directly available. When ComPair is installed together with

the SearchMan MG3.1E electronic manual, schematics and PCBs are only a mouse-click away.

ComPair consists of a Windows based fault finding progra and an interface box between PC and the (defective) product. The ComPair interface box is connected to the PC via a serial or RS232 cable. In case of the MG3.1E chassis, the ComPair interface box and the television communicate with each other via bi-directional infrared signal.

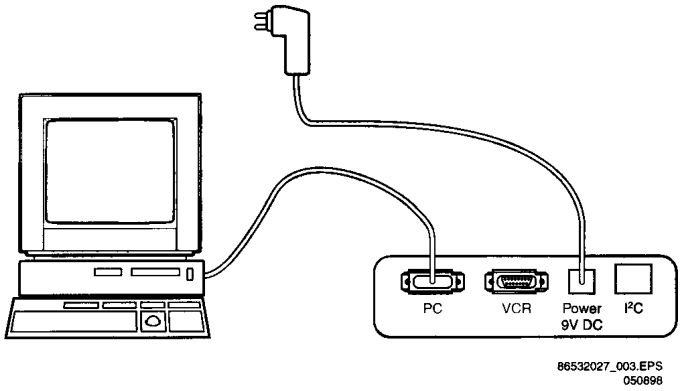


Figure 5-19

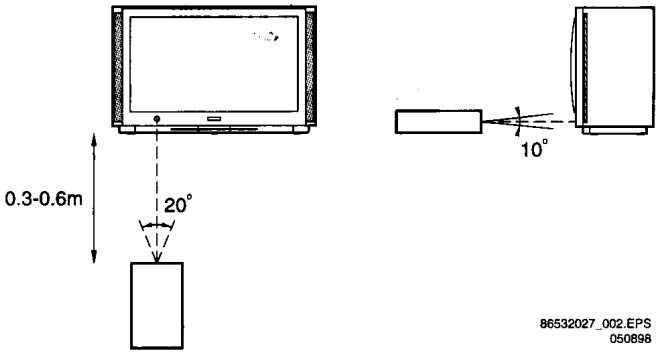


Figure 5-20

The ComPair fault finding program is able to determine the problem of the defective television. ComPair can gather diagnostic information in 2 ways:

1. Communication to the television (automatic)
2. Asking questions to you (manually)

ComPair combines this information with the repair information in its database to find out how to repair the MG3.1E.

Ordering ComPair

ComPair-ordercodes:

- Starterkit Compair+SearchMan software + Compair interface (excluding transformer): 4822 727 21629
- Compair interface (excluding transformer): 4822 727 21631
- Compair transformer (continental) Europe: 4822 727 21632
- Compair transformer United Kingdom: 4822 727 21633
- Starterkit Compair software: 4822 727 21634
- Starterkit SearchMan software: 4822 727 21635
- Compair interface cable: 4822 727 21641

Automatic information gathering

Step-by-step start up. Under normal circumstances, a fault in the power supply or an error during start-up will switch the television to protection-mode. ComPair can take over the initialisation of the television. In this way it is possible to distinguish which part of the start-up routine (hence which circuitry) is causing the problem.

Reading out the error buffer, ComPair can automatically read out the contents of the entire error buffer.

Diagnosis on I2C level. ComPair can access the I2C bus of the television without a physical connection. ComPair can send and receive infrared commands to the micro controller of the television. These commands are translated by the controller to I2C commands and vice versa. In this way it is possible for ComPair to communicate (read and write) to devices on the I2C busses of the MG3.1E.

Manual information gathering

Automatic diagnosis is only possible if the micro controller of the television is working correctly and only to a certain extend. When this is not the case, ComPair will guide you through the fault finding tree by asking you questions and showing you examples. You can answer by clicking on a link (e.g. text or an oscillogram) that will bring you to the next step in the faultfinding process.

A question could be: Do you see snow? (Click on the correct answer)

YES / NO

An example can be: Measure testpoint I7 and click on the correct oscillogram you see on the oscilloscope

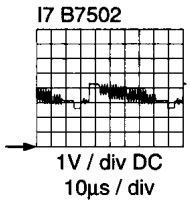


Figure 5-21

By a combination of automatic diagnostics and an interactive question/answer procedure, ComPair will enable you to find most problems in a fast and effective way.

Additional features

Beside fault finding, ComPair provides some additional features like:

- Uploading/downloading of presets
- Managing of preset lists
- Emulation of the Dealer Service Tool

SearchMan (electronic service manual

When ComPair is installed in combination with SearchMan, all schematics and PCBs will be directly available while you repai a television if you click on a PCB or schematic link.

Example: Measure the DC voltage on C2568 (PCB/schematic) on the small signal level.

Clicking on PCB will automatically pop-up a picture of the PCB with the location of C2568 marked. Clicking on schematic will automatically pop-up the schematic with the location of C256 marked.

Stepwise Startup /Shutdown feature of set can be used vi Compair

Stepwise startup explanation

Via ComPair the stepwise startup (see also chapter 4) can be realised. This is very helpful when a protection is activated.

State	Description mode	Display leds	Errorcode possible
0	Low Power Standby/uC in Stby	Red on	None
1	High Power Standby/set in Stby	Red 0.5Hz	None
2	Supply on. Protections 5V2, 8V6, DC-Prot activated.	Orange/Green 0.25 Hz	67,68,76
3	ICs initialized (Sound). Protection FBX-, Edric, Tuner activated	Orange/Green 0.5 Hz	plus 77, 78, 80
4	EHT startup. No blackcurrent stabilisation. Protections VFB, HFB, LDP, BC-prot activated (blanked picture)	Orange/Green 2 Hz	plus 70,71,73,74
5	TV operates, unblanked picture	Orange/Green 10 Hz	

Stepwise shutdown explanation
In the stepwise shutdown mode, state 2 is skipped. (ICs can not be de-initialised).

State	Description mode	Display leds (Note*)	Prot. de-activated
5	TV operates, unblanked picture	Orange/Green 10 Hz	-
4	No blackcurrent stabilisation (no picture). All protections are enabled.	Orange/Green 2 Hz	-
3	ICs stay initialised. (Sound). All protections are off.	Orange/Green 0.5 Hz	74,73,71,70
1	High Power Standby/set in Stby	Red 0.5Hz	80, 78, 77,76,68,67
0	Low Power Standby/uC in Stby	Red on	-

Note: When set is in stepwise-mode and due to stepping-up a protection is activated, the set really will go into protection (blinking red led). The set will not leave the stepwise-mode however. By stepping up the set can be activated again, until state X, where protection was activated. At state (X-1) diagnostic measurements can be performed.

5.3 Error codes

5.3.1 Reading error codes from the error buffer

The error buffer can be read in 2 ways:
1. On the screen via the Service Alignment Mode (SAM). In case picture is OK, the error buffer can be read easiest via the SAM. In the main menu of the SAM the last 10 different error codes occurred are displayed. The most recent detected error code is displayed on the left side, so e.g.:

0 0 0 0 0 means no error codes present in the buffer
3 0 0 0 0 means one error code present in the buffer; error code 3
2 3 0 0 0 means two error codes present in the buffer; error code 2 is the most recent, error code 3 is detected before 2

1. On the display of the DST. If an error has been detected by the MG3.1E chassis, the set might go into protection. Without the presence of a picture the errors can be read by the DST, as long as the main-processor is still active (red LED blinking fast (3Hz).

To transmit the errors from the TV to the DST:
- Press the "DIAGNOSE" key (in all modes except the SAM).
- Press "1" to view the last error detected.
- Hold the DST 5 to 10 cm in front of the stand-by LED of the set (the IR-sending LED of MG3.1E is located near the stand-by LED).
- Press the "OK" key.

The error is represented by a 1 or2 digit number. The 1 or 2 digits on the DST are displayed sequentially, with a pause before it is repeated. The digit after the pause is the 1st digit. If the display reads 4 - 7, the error code is 47. To read other error codes, press "DIAGNOSE" and one of the other digit keys.
Note:
1. If the DST cannot communicate to the MG3.1E in a proper way, ERROR 2 is shown in the display of the DST. Trying again by changing the DST position a little bit might help.
2. If the error buffer of MG3.1E is empty, no errors are displayed by the DST; the display remains blank.

5.3.2 Clearing the error buffer

The error buffer can be cleared in 2 ways:
1. In the SAM by selecting the item RESET ERROR BUFFER in the main menu.
2. By the "DIAGNOSE 99" command of the DST (in all modes except the SAM). Press the DIAGNOSE key on the DST, followed by 9 and 9 and then .

Note: When error buffer is full (10 codes), no new error can be stored anymore. However of every error raised is monitored how long it exists in the error buffer. When for any reason a false raised error exists in the buffer, it will be deleted after 50 hours. If this error still is actual after 50 hours, it will be raised again. In this way is safeguarded that history of error codes is stored. Sometimes it is an option to first write down the error buffer content, reset the buffer, and look again which error codes are generated by the set.

5.3.3 Error code table

Error	Device	Description	Defective item	Diagram	Defective module indication
2	ST24E32 or M24C32	Non volatile memory	IC7008	K7	Control
3	SAA5801	OTC2.5 microprocessor/TXT	IC7003	K7	Control
5	UV1316	Tuner	U1102	K1	Tuner
10	TEA6415	I/O source select video	IC7208	K8	Source select
11	TEA6422	I/O source selct audio	IC7777	K8	Source select
15	TDA9320H	HIP I/O-video processing	IC7501	K1	Chroma IF I/O
20	TDA9330H	HOP video control/deflection processor	IC7300	K6	Video Controller
21	TDA9178	LTP Peaking	IC7402	K6	Video Controller
25	MSP3410D	ITT sound processor	IC7751	K3	Audio module
26	SAA7712H	SEDSP dolby processor	IC7770	K4	Audio module
35	UV1316	FDS Tuner	U1102	M1	Video Dual Screen Panel
36	PCF8574	FDS I/O Expander	IC7860	M2	Video Dual Screen Panel
37	SAB9079	FDS Popov	IC7700	M4	Video Dual Screen Panel
38	TDA9320	FDS HIP2	IC7501	M1	Video Dual Screen Panel
39	M24C04	FDS NVM	IC7991	M1	Video Dual Screen Panel
40	83C751	Cordless Transmitter processor	IC7105	R	Surround Transmitter Panel
41	TDA7309	FDS Headphone	IC7620	M5	Video Dual Screen Panel
50	SAA4978H	FBX Picnic	IC7611	L1	Feature Box
53	SAA4992	FBX Falconic	IC7626	L3	Feature Box
54	SAA4997	FBX Veric	IC7621	L2	Feature Box
55	SAA4996	FBX Macpacic	IC7616	L2	Feature Box
56	83C654	MCS processor	IC7803	N3	Digital Audio Module
57	TDA7438	MCS SOFAC L/R	IC7540	N8	Digital Audio Module
58	TDA7438	MCS SOFAC L/R	IC7600	N9	Digital Audio Module
59	TDA7438	MCS SOFAC L/R	IC7570	N10	Digital Audio Module
61	PCF8574	MCS I/O expander	IC7690	N16	Digital Audio Module
65	Slow IC bus blocked		see fig 5-23		Slow IC bus blocked
66	Fast IC bus blocked		see fig 5-23		Fast IC bus blocked
67	Supply 5V	5V2	see fig 5-22		+5 V Supply
68	Supply 8V	8V6	see fig 5-22		+8V Supply
70	V fail protection	VFB	fig 5-25	A3/A1/ K6	Vertical Flyback
71	H fail protection	HFB	fig 5-25	A1/K6	Horizontal Flyback
73	Line Deflection protection	LDP	fig. 5-24	A1/K6	Line Deflection
74	Beam Current Protection	BC-PROT	fig. 5-24	K6/K7	Beam Current
76	DC Sound protection	DC-PROT	fig. 5-26	A4	Sound Output
77	Feature box protection	FBX-PROT	fig. 5-22	L1	+3V (FBX) Supply
78	Edric protection	EDRIC-PROT	fig. 5-22	K4	+3V (Edric) Supply
80	Tuner protection	Tuner-PROT	fig. 5-22	K1	+8V (Tuner) Supply

Remark:If on the DST the text "ERROR 2" is displayed, this means that the communication from the TV to the DST has failed

5.4 Protections

5.4.1 General

The MG3.1E "Protection Diagram" shows the structure of the protection system. See protection diagram (fig 5-22).
One micro-processor.
The MG3.1E has only one micro-processor (OTC) and it remains active during Standby. This because power of the microprocessor and the attached memory chip set is coming from the 3V3 supply, which is derived from the 5V Standby-circuitry. So in both power-on as in Standby-mode the microprocessor is connected to this power supply. The micro processor controls the Standby-line for switching on and off the main supply. In the standby-mode or in the protection-mode the Standby-line will open the contacts of relay 1002 via T7000 and T7001, this results in switching off the mains input to the main supply . In the mean time via T7550 the intensity of LED of the opto-coupler will increase, which results in a quick slow-down of the supply.
Two service-modes.
To get a quick diagnoses the MG3.1E has two service-modes implemented:

- The service default mode. Start-up of the set in a predefined way.
- The service alignment mode. In this mode items of the set can be adjusted via a menu and with the help of test patterns.

Both modes can be entered via the service connector on the SSP (connector 0356) or via the DST (dealer service tool) or via ComPair. The service alignment mode can not be entered by the DST in Standby, the set has to be in normal operation.
Protection levels.
If a fault situation is detected an error code will be generated and if necessary the set will be put in the protection-mode. The protection-mode is indicated by blinking of the red LED. In some error cases the micro processor does not put the set in the protection-mode. The error codes of the error buffer can be read via the service-menu (SAM) or via the service send-LED and the DST/ ComPair . The DST diagnose functionality will force the set into the Service-standby, which is alike the usual Standby, however the micro-processor has to remain in normal operation completely.
The protections of the MG3.1E can be divided in 4 groups ;

- Protection from I2C-busses (Fast and Slow) or I2C-IC errors (device errors).
- Protection from the inputs on the OTC.
- Protections from the status register of the HOP (communicated via I2C-bus).
- DC-protection (sound amplifiers) monitored on OTC.

5.4.2 Protection from the I2C bus (fig. 5-23).

In normal operation some registers of the I2C controlled ICs will be refreshed every 200 msec. During this sequence three I2C -busses and the I2C -ICs as well will be checked. The I2C protection will take place if the SDA and SCL are whether short circuited to ground or to each other. An I2C error can also occur, if the power supply of the IC is missing.

5.4.3 Protection from the inputs on the OTC (fig.5-22).

If a protection is detected at an input of the OTC, all protection inputs of the OTC will be scanned every 200 msec. for 5 times. If the protection on one of the inputs is still activated after 1 sec., then the set will be put in the protection-mode. Before the scanning is started a so-called ESD-refresh will be carried out first, because the interrupt on one of the inputs may be caused either by a FLASH or by ESD. As a FLASH or ESD can harm the settings of some ICs, the HOP-HIP-ITT-EDRIC-TEA6417-TEA6422-LTP-PICNIC and Tuner are initialised again to ensure the normal picture and sound conditions of the set.

- 8V6 and 5V2 protection (see detailed figure 5-24)

The presence of the 8V6 and 5V2 is sensed by the OTC. If the 8V6 and 5V2 is not present, then an error code is stored in the error buffer and the set is put in the protection-mode.

- BC protection (Beam Current). (See detailed figure 5-24)

The beam current is measured by a circuit on the SSP. If the beam current exceeds a certain reference level, then via D6350 and T7351 the BC-input of the OTC is set to high. The error code is stored in the error buffer and the set is put in the protection-mode.

- DC-protection. (Fig. 5-26)

This is an urgent protection, the circuitry is located at the LSP. The output of the protection circuit will slow-down the power supply immediately via the opto-coupler and via the Standby-relay the supply will be switched into Standby-mode at once. To be able to store the error code in the error buffer the protection signals are also wired to the OTC.
The protection is activated in case of :

- Unbalance of +Vs and -Vs
- Unbalance of +7V7 and -7V7
- DC output present on one of the audio amplifiers
- Unbalance supplies on MCS-module

5.4.4 Protections from the status register of the HOP (fig. 5-22)

Every 200 msec. the status register of the HOP is read by the OTC via I2C. If a protection signal is detected on one of the inputs of the HOP, then the relevant error bit in the HOP register is set to 'high'. If the error bit is still 'high' after 1 sec., the OTC will store the error code in the error buffer and depending on the relevancy of the error bit the set will either go into the protection-mode or not.

- HFB: Horizontal Flyback (See detailed figure 5-25)

If the horizontal flyback is not present, then this is detected via the HOP. One status bit is set to 'high'. The error code is stored in the error buffer and the set will go into the protection mode

- VFB: Vertical Flyback (See detailed figure 5-25).

The HOP will blank the screen , if the vertical flyback signals are not present at the VFB-guard input .The relevant status bit will be set in the register of the HOP.
The error code is stored in the error buffer, in this case protection is not necessary.

- LDP-protection (Line Deflection Protection) (See detailed figure 5-24)

Two protection circuits are connected to the LDP-input of the HOP :

- Flash detection.

From the EHT-info, via D6341 and T7341 a flash will stop the H-drive and line output stage immediately. The FLS-bit in the status register of the HOP is set to 'high'. As the duration of a flash is very short the FLS-bit will be reset to 'low' again after the flash refresh, so via a slow start the set will be started again.

- LDP detection.

The EW-protection, coming from the line-output is also connected to the same input as above. The current through the EW-stage is measured by R3483 and R3484 on the LSP. The voltage across these precision resistors will increase in case of a failure at the line output stage. If the voltage becomes higher than 1 V, then the output of IC7484 will become 'high' and remains 'high' via D6485 and R3490.
Via D6344 the H-drive will be stopped. The FLS-bit will be set to 'high' and remains 'high' by means of the software filtering even after a flash refresh. The OTC will put the set in Standby-mode. The error code is stored in the error buffer and the set gets into the protection mode.

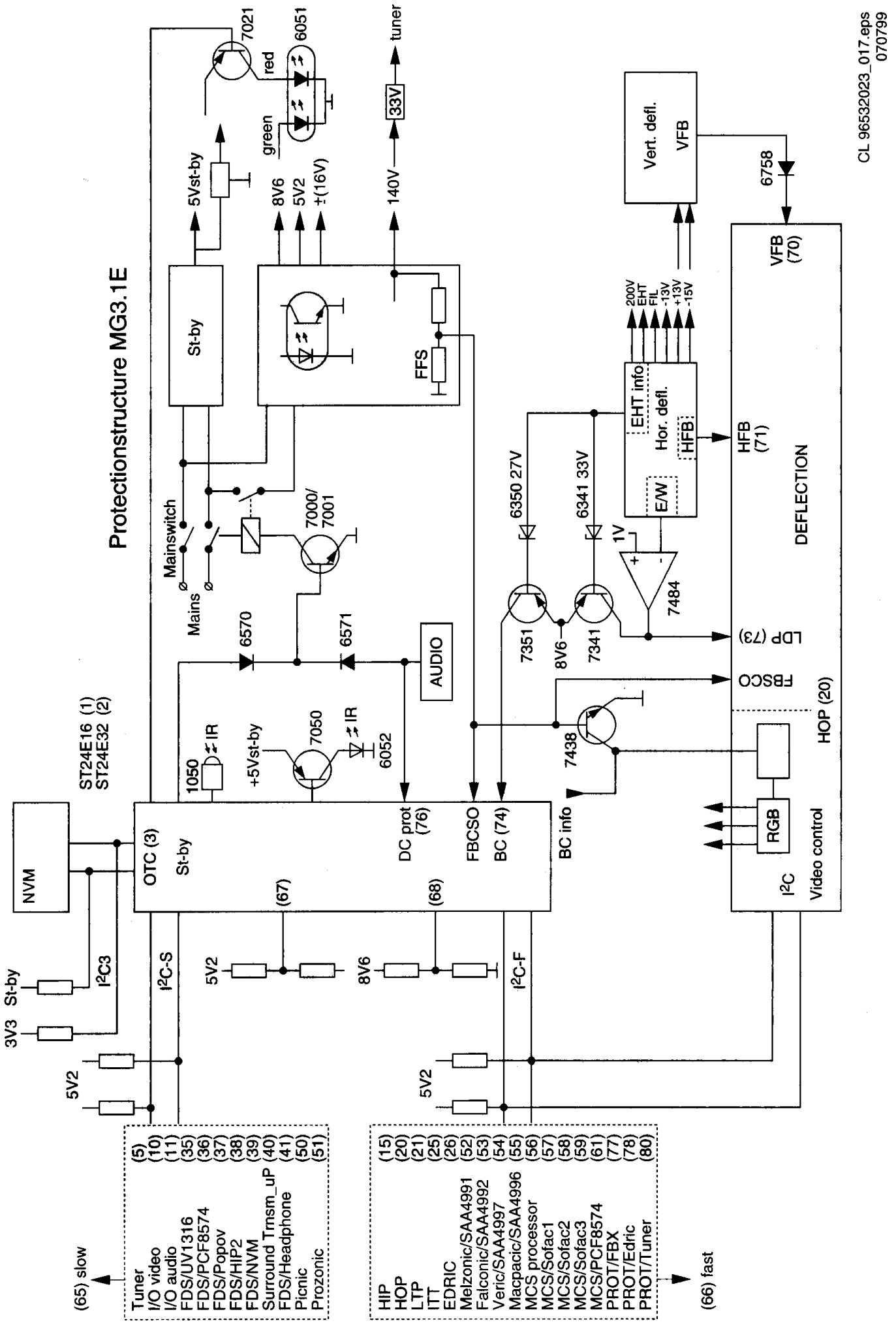
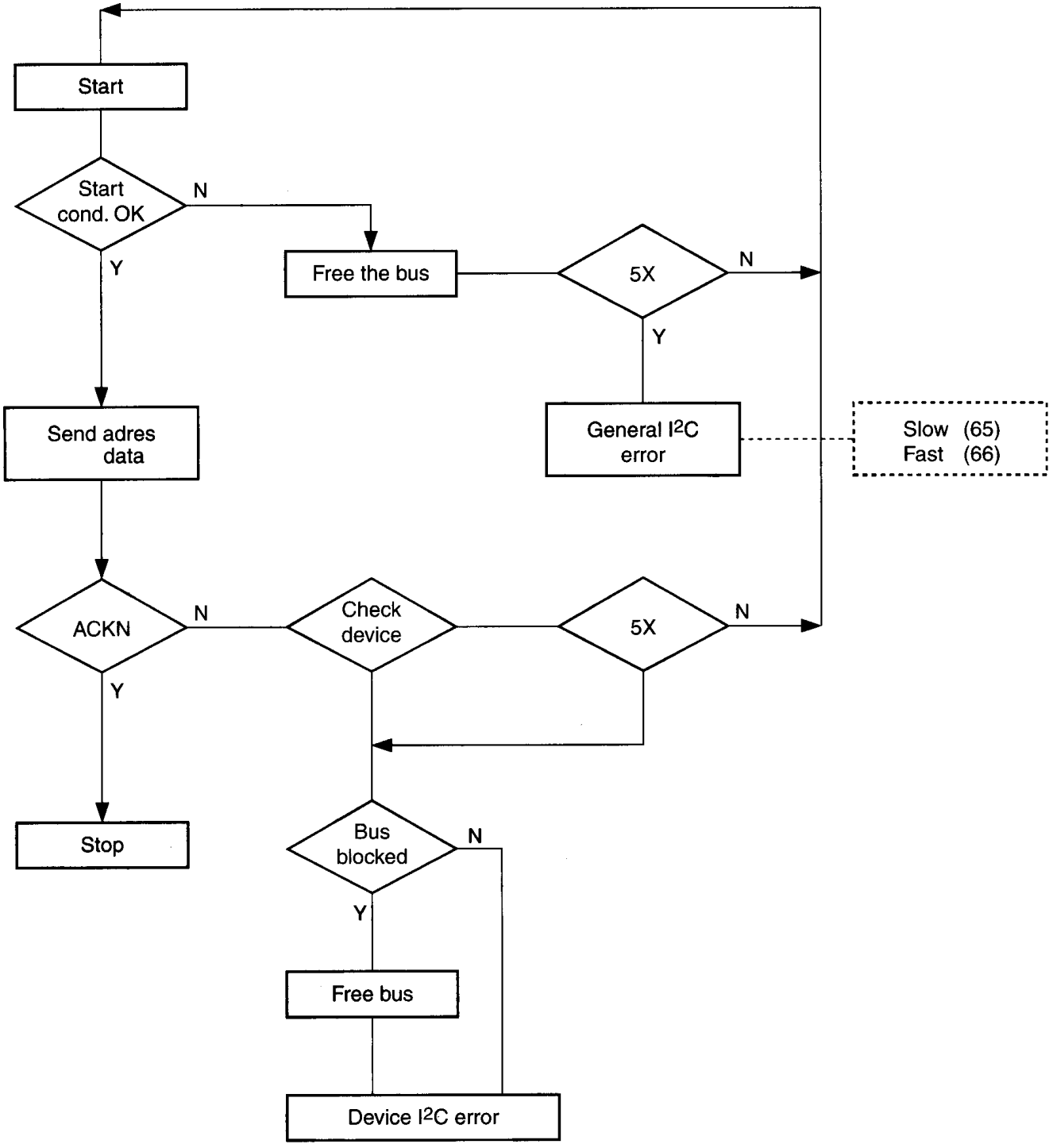

Protectionstructure MG3.1E
CL 96532023_017.eps 070799
7021
6051
red
green
tuner
33V
140V
5Vst-by
8V6
5V2
±(16V)
St-by
FFS
Mainswitch
Mains
7000/ 7001
6570
6571
AUDIO
1050
IR
+5Vst-by
7050
6052
ST24E16 (1)
ST24E32 (2)
NVM
OTC (3)
St-by
DC prot (76)
FBCSO
BC (74)
BC info
(67)
(68)
I²C3
I²C-S
I²C-F
3V3 St-by
5V2
8V6
Vert. defl.
VFB
6758
VFB (70)
200V
EHT
FIL
-13V
+13V
-15V
EHT info
Hor. defl.
HFB
E/W
6350 27V
6341 33V
1V
7484
7351
7341
8V6
HFB (71)
DEFLECTION
LDP (73)
FBSCO
HOP (20)
7438
RGB
I²C
Video control
(65) slow
Tuner
I/O video
I/O audio
FDS/UV1316
FDS/PCF8574
FDS/Popov
FDS/HIP2
FDS/NVM
Surround Trnsm_uP
FDS/Headphone
Picnic
Prozonic
(5)
(10)
(11)
(35)
(36)
(37)
(38)
(39)
(40)
(41)
(50)
(51)
HIP
HOP
LTP
ITT
EDRIC
Melzonic/SAA4991
Falconic/SAA4992
Veric/SAA4997
Macpacic/SAA4996
MCS processor
MCS/Sofac1
MCS/Sofac2
MCS/Sofac3
MCS/PCF8574
PROT/FBX
PROT/Edric
PROT/Tuner
(15)
(20)
(21)
(25)
(26)
(52)
(53)
(54)
(55)
(56)
(57)
(58)
(59)
(61)
(77)
(78)
(80)
(66) fast

Figure 5-22

I²C drivers



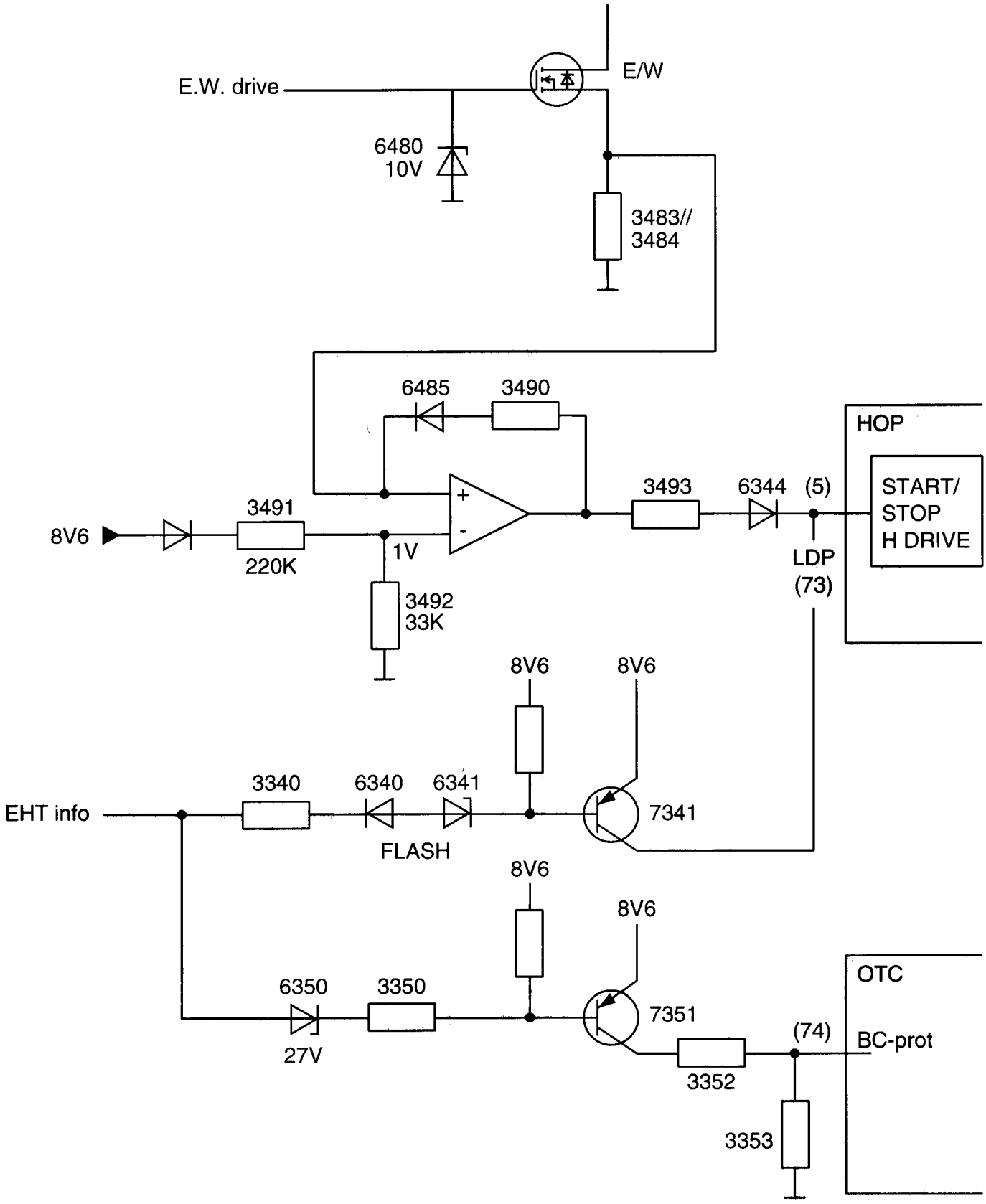
Slow	
1102 (Tuner)	(5)
7609 (Picnic)	(50)
7608 (Prozonic)	(51)
7501 (I/O Video)	(10)
Feature box	(77)

Fast	
7402 (LTP)	(21)
7770 (Dolby)	(26)
7751 (ITT)	(25)
7501 (HIP)	(15)
7300 (HOP)	(20)

NVM-bus	
7008 (NVM)	(1)
	(2)

jsp 86532047_036.eps
261198

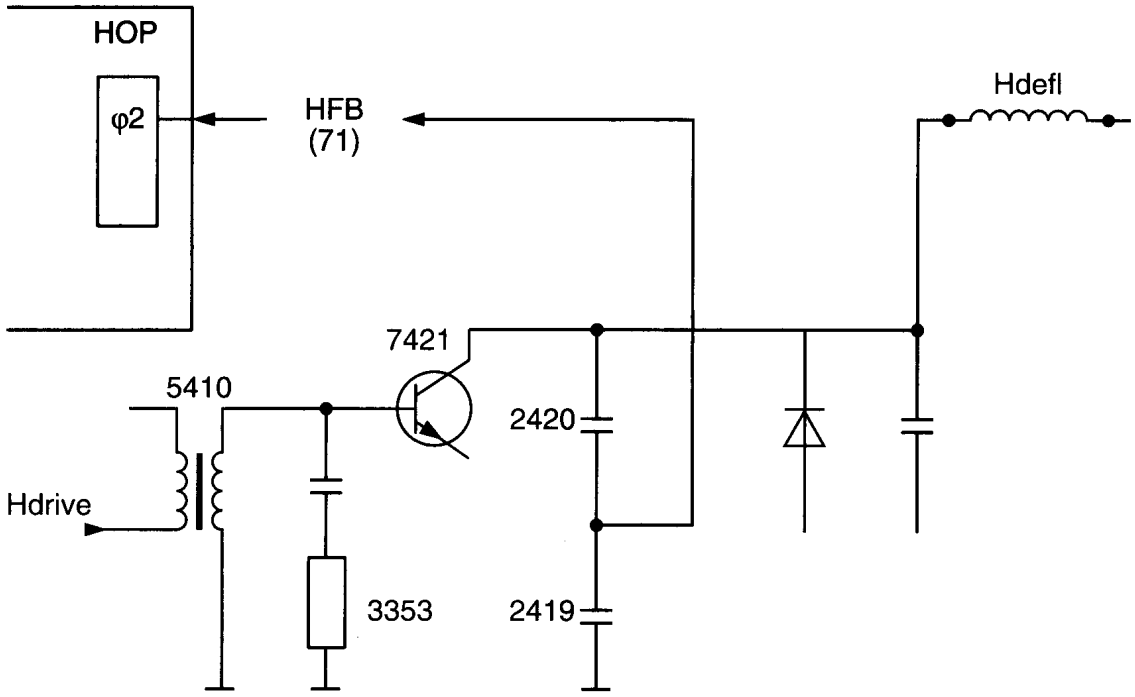
Figure 5-23



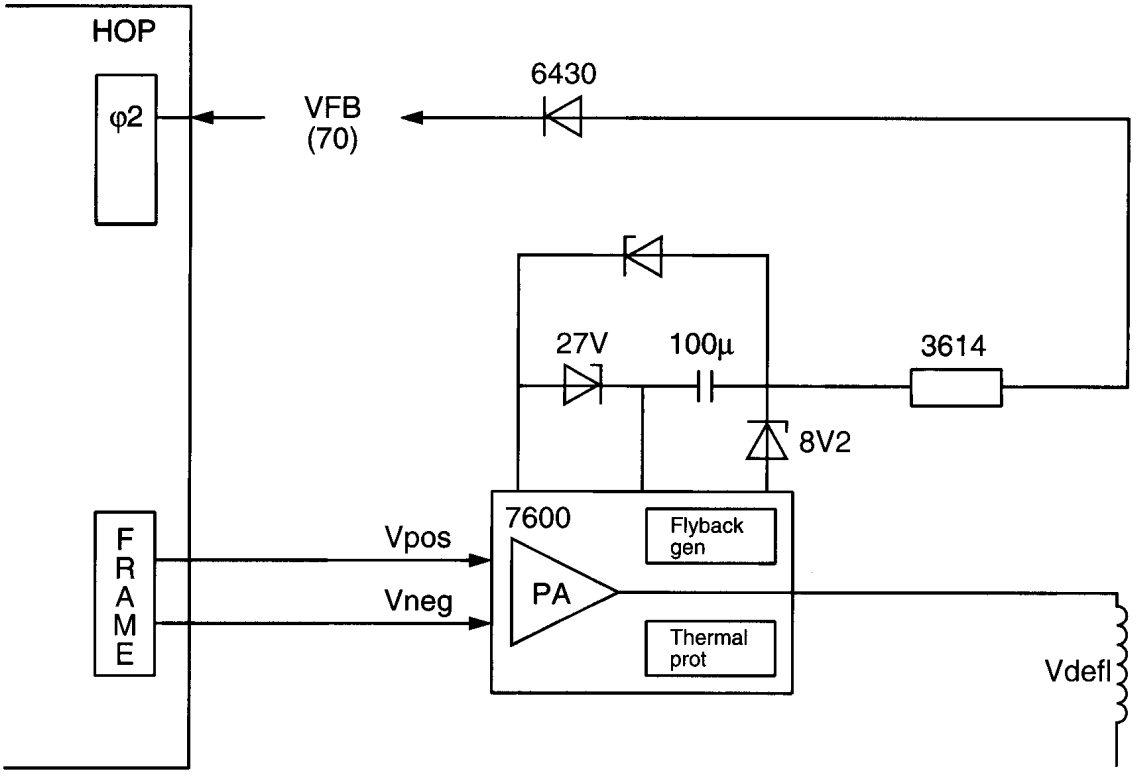
CL 86532092_013.eps
031198

Figure 5-24

HFB horizontal fly-back



VFB vertical fly-back



CL 96532023_018.eps
210499

Figure 5-25

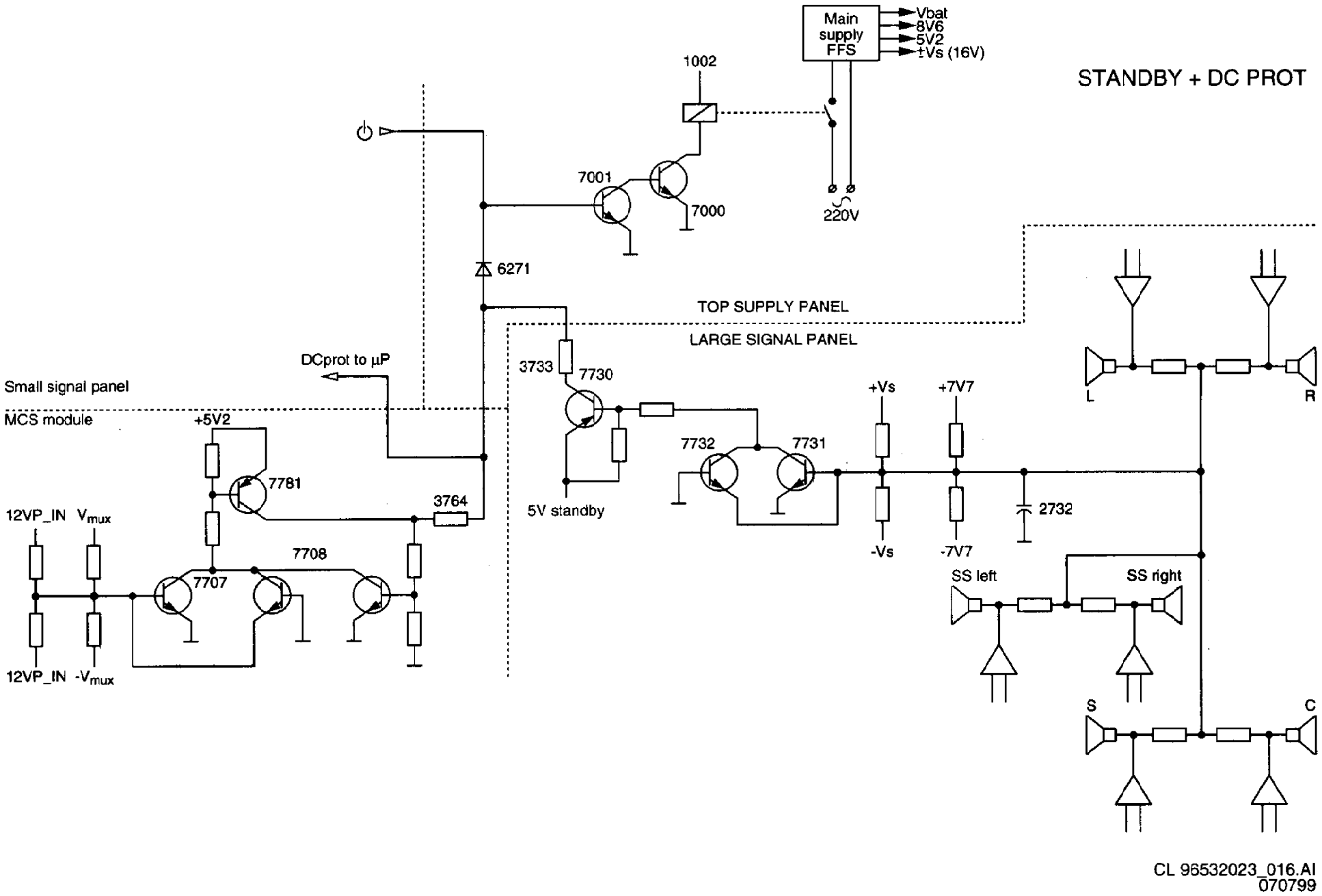
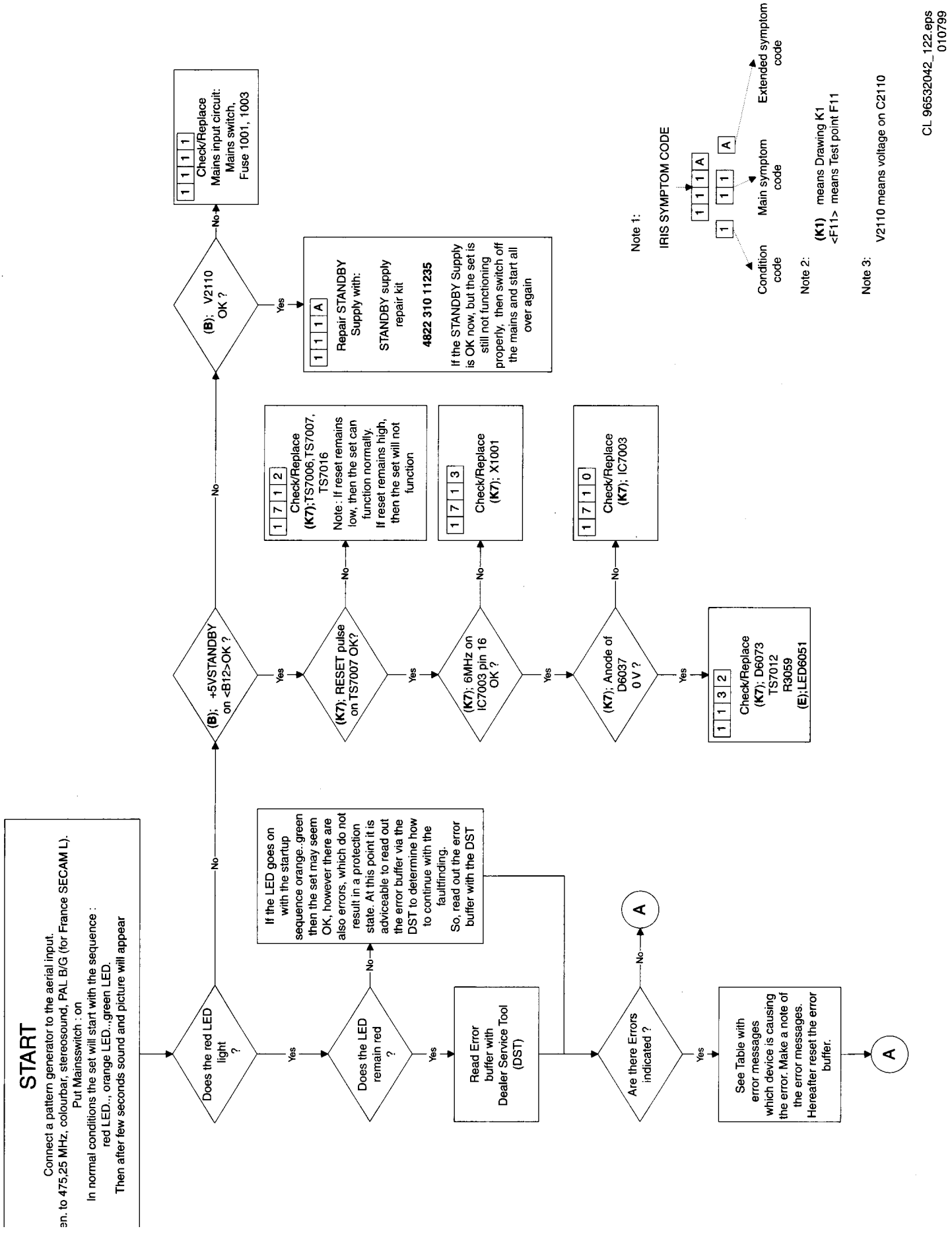
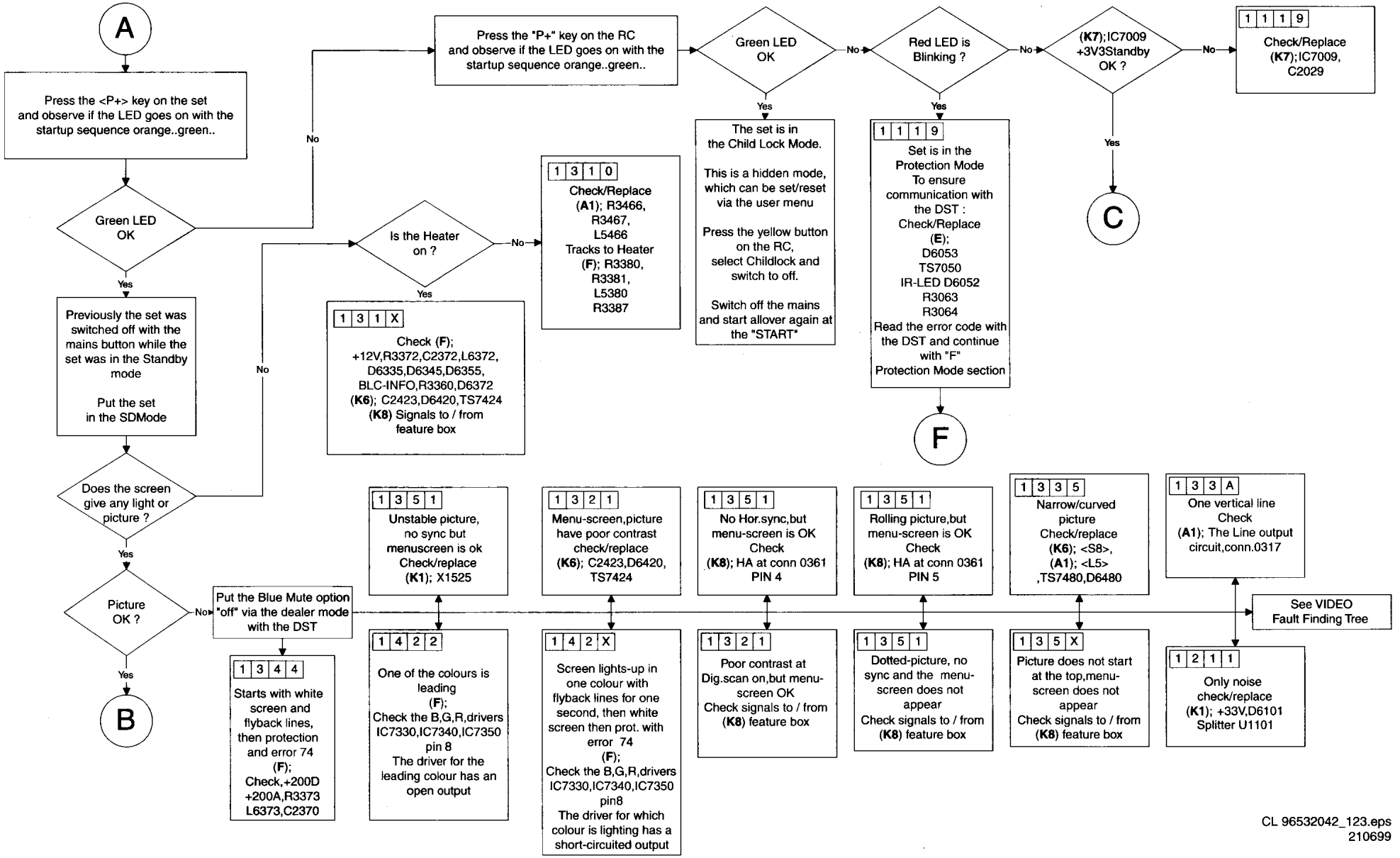

STANDBY + DC PROT
Main supply FFS
Vbat
8V6
5V2
±Vs (16V)
1002
7001
7000
220V
6271
TOP SUPPLY PANEL
LARGE SIGNAL PANEL
DCprot to µP
Small signal panel
MCS module
+5V2
7781
3764
12VP_IN Vmux
12VP_IN -Vmux
7708
7707
3733
7730
5V standby
7732
7731
+Vs
+7V7
-Vs
-7V7
2732
L
R
SS left
SS right
S
C
CL 96532023_016.AI
070799

Figure 5-26

5.5 Fault find trees


START
Connect a pattern generator to the aerial input.
an. to 475,25 MHz, colourbar, stereosound, PAL B/G (for France SECAM L).
Put Mainsswitch : on
In normal conditions the set will start with the sequence :
red LED., orange LED.,green LED.
Then after few seconds sound and picture will appear
Does the red LED light ?
Yes
No
Does the LED remain red ?
Yes
No
If the LED goes on with the startup sequence orange..green then the set may seem OK, however there are also errors, which do not result in a protection state. At this point it is adviceable to read out the error buffer via the DST to determine how to continue with the faultfinding.
So, read out the error buffer with the DST
Read Error buffer with Dealer Service Tool (DST)
Are there Errors indicated ?
No
A
Yes
See Table with error messages which device is causing the error. Make a note of the error messages. Hereafter reset the error buffer.
A
(B); +5VSTANDBY on <B12>OK ?
Yes
No
(K7); RESET pulse on TS7007 OK?
Yes
No
1 7 1 2 Check/Replace (K7);TS7006,TS7007, TS7016
Note : If reset remains low, then the set can function normally. If reset remains high, then the set will not function
(K7); 6MHz on IC7003 pin 16 OK ?
Yes
No
1 7 1 3 Check/Replace (K7); X1001
(K7); Anode of D6037 0 V ?
Yes
No
1 7 1 0 Check/Replace (K7); IC7003
1 1 3 2 Check/Replace (K7); D6073 TS7012 R3059 (E);LED6051
(B); V2110 OK ?
Yes
No
1 1 1 1 Check/Replace Mains input circuit: Mains switch, Fuse 1001, 1003
1 1 1 A Repair STANDBY Supply with:
STANDBY supply repair kit
4822 310 11235
If the STANDBY Supply is OK now, but the set is still not functioning properly, then switch off the mains and start all over again
Note 1:
IRIS SYMPTOM CODE
1 1 1 A
1 1 1 A
Condition code
Main symptom code
Extended symptom code
Note 2:
(K1) means Drawing K1
<F11> means Test point F11
Note 3:
V2110 means voltage on C2110
CL 96532042_122.eps
010799


A
Press the <P+> key on the set and observe if the LED goes on with the startup sequence orange..green..
Green LED OK
No
Yes
Press the "P+" key on the RC and observe if the LED goes on with the startup sequence orange..green..
Green LED OK
No
Yes
The set is in the Child Lock Mode.
This is a hidden mode, which can be set/reset via the user menu
Press the yellow button on the RC, select Childlock and switch to off.
Switch off the mains and start allover again at the "START"
Red LED is Blinking ?
No
Yes
1 1 1 9
Set is in the Protection Mode
To ensure communication with the DST :
Check/Replace
(E);
D6053
TS7050
IR-LED D6052
R3063
R3064
Read the error code with the DST and continue with "F"
Protection Mode section
F
(K7);IC7009 +3V3Standby OK ?
No
Yes
C
1 1 1 9
Check/Replace
(K7);IC7009,
C2029
Is the Heater on ?
No
Yes
1 3 1 0
Check/Replace
(A1); R3466,
R3467,
L5466
Tracks to Heater
(F); R3380,
R3381,
L5380
R3387
1 3 1 X
Check (F);
+12V,R3372,C2372,L6372,
D6335,D6345,D6355,
BLC-INFO,R3360,D6372
(K6); C2423,D6420,TS7424
(K8) Signals to / from feature box
Previously the set was switched off with the mains button while the set was in the Standby mode
Put the set in the SDMode
Does the screen give any light or picture ?
No
Yes
Picture OK ?
No
Yes
B
Put the Blue Mute option "off" via the dealer mode with the DST
1 3 4 4
Starts with white screen and flyback lines, then protection and error 74
(F);
Check,+200D
+200A,R3373
L6373,C2370
1 3 5 1
Unstable picture, no sync but menuscreen is ok
Check/replace
(K1); X1525
1 4 2 2
One of the colours is leading
(F);
Check the B,G,R,drivers IC7330,IC7340,IC7350 pin 8
The driver for the leading colour has an open output
1 3 2 1
Menu-screen,picture have poor contrast
check/replace
(K6); C2423,D6420, TS7424
1 4 2 X
Screen lights-up in one colour with flyback lines for one second, then white screen then prot. with error 74
(F);
Check the B,G,R,drivers IC7330,IC7340,IC7350 pin8
The driver for which colour is lighting has a short-circuited output
1 3 5 1
No Hor.sync,but menu-screen is OK
Check
(K8); HA at conn 0361 PIN 4
1 3 2 1
Poor contrast at Dig.scan on,but menu-screen OK
Check signals to / from (K8) feature box
1 3 5 1
Rolling picture,but menu-screen is OK
Check
(K8); HA at conn 0361 PIN 5
1 3 5 1
Dotted-picture, no sync and the menu-screen does not appear
Check signals to / from (K8) feature box
1 3 3 5
Narrow/curved picture
Check/replace
(K6); <S8>,
(A1); <L5>
,TS7480,D6480
1 3 5 X
Picture does not start at the top,menu-screen does not appear
Check signals to / from (K8) feature box
1 3 3 A
One vertical line
Check
(A1); The Line output circuit,conn.0317
See VIDEO Fault Finding Tree
1 2 1 1
Only noise
check/replace
(K1); +33V,D6101
Splitter U1101

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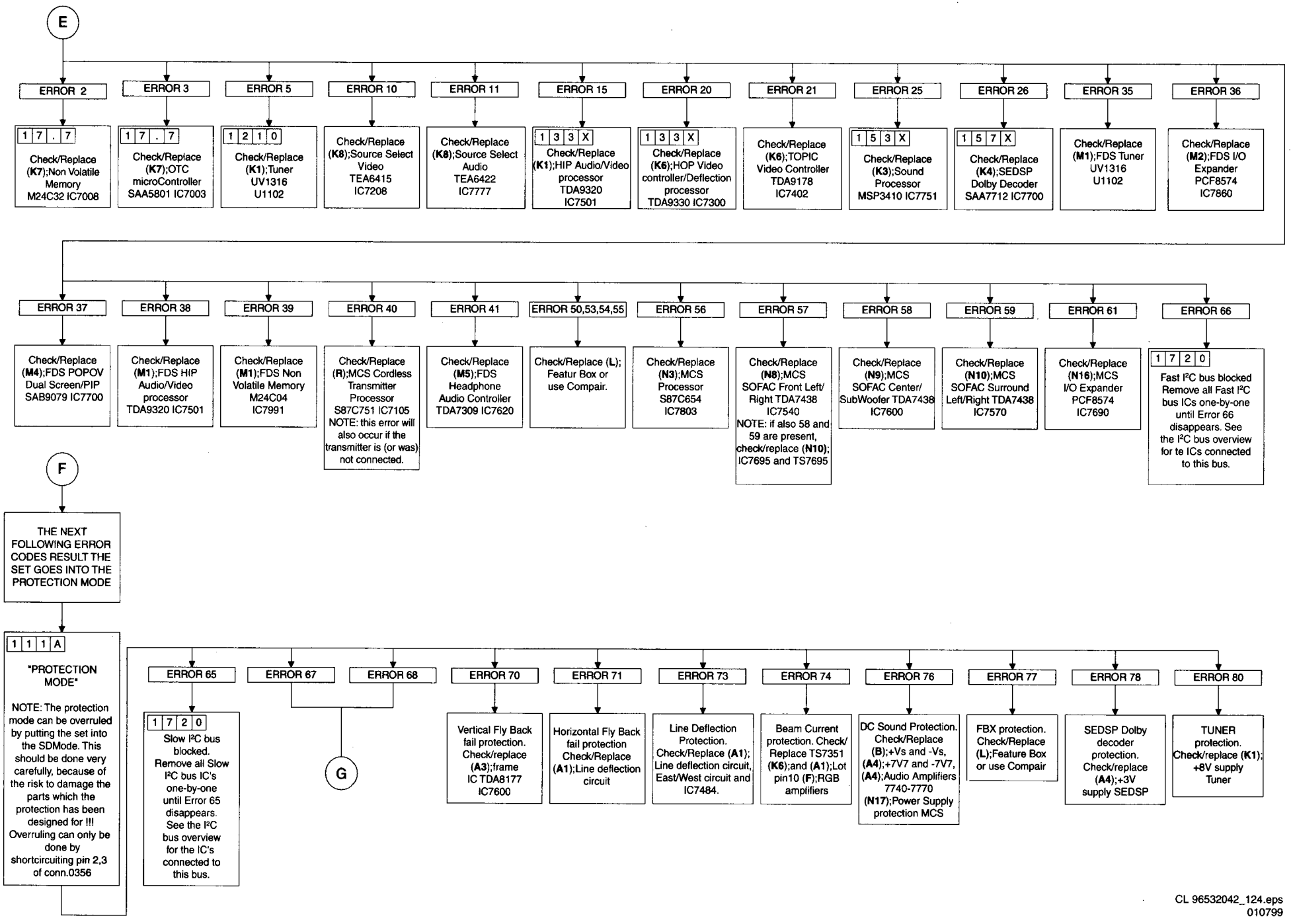
E
ERROR 2
1 7 . 7
Check/Replace (K7);Non Volatile Memory M24C32 IC7008
ERROR 3
1 7 . 7
Check/Replace (K7);OTC microController SAA5801 IC7003
ERROR 5
1 2 1 0
Check/Replace (K1);Tuner UV1316 U1102
ERROR 10
Check/Replace (K8);Source Select Video TEA6415 IC7208
ERROR 11
Check/Replace (K8);Source Select Audio TEA6422 IC7777
ERROR 15
1 3 3 X
Check/Replace (K1);HIP Audio/Video processor TDA9320 IC7501
ERROR 20
1 3 3 X
Check/Replace (K6);HOP Video controller/Deflection processor TDA9330 IC7300
ERROR 21
Check/Replace (K6);TOPIC Video Controller TDA9178 IC7402
ERROR 25
1 5 3 X
Check/Replace (K3);Sound Processor MSP3410 IC7751
ERROR 26
1 5 7 X
Check/Replace (K4);SEDSP Dolby Decoder SAA7712 IC7700
ERROR 35
Check/Replace (M1);FDS Tuner UV1316 U1102
ERROR 36
Check/Replace (M2);FDS I/O Expander PCF8574 IC7860
ERROR 37
Check/Replace (M4);FDS POPOV Dual Screen/PIP SAB9079 IC7700
ERROR 38
Check/Replace (M1);FDS HIP Audio/Video processor TDA9320 IC7501
ERROR 39
Check/Replace (M1);FDS Non Volatile Memory M24C04 IC7991
ERROR 40
Check/Replace (R);MCS Cordless Transmitter Processor S87C751 IC7105 NOTE: this error will also occur if the transmitter is (or was) not connected.
ERROR 41
Check/Replace (M5);FDS Headphone Audio Controller TDA7309 IC7620
ERROR 50,53,54,55
Check/Replace (L); Featur Box or use Compair.
ERROR 56
Check/Replace (N3);MCS Processor S87C654 IC7803
ERROR 57
Check/Replace (N8);MCS SOFAC Front Left/ Right TDA7438 IC7540 NOTE: if also 58 and 59 are present, check/replace (N10); IC7695 and TS7695
ERROR 58
Check/Replace (N9);MCS SOFAC Center/ SubWoofer TDA7438 IC7600
ERROR 59
Check/Replace (N10);MCS SOFAC Surround Left/Right TDA7438 IC7570
ERROR 61
Check/Replace (N16);MCS I/O Expander PCF8574 IC7690
ERROR 66
1 7 2 0
Fast I²C bus blocked Remove all Fast I²C bus ICs one-by-one until Error 66 disappears. See the I²C bus overview for te ICs connected to this bus.
F
THE NEXT FOLLOWING ERROR CODES RESULT THE SET GOES INTO THE PROTECTION MODE
1 1 1 A
"PROTECTION MODE"
NOTE: The protection mode can be overruled by putting the set into the SDMode. This should be done very carefully, because of the risk to damage the parts which the protection has been designed for !!! Overruling can only be done by shortcircuiting pin 2,3 of conn.0356
ERROR 65
1 7 2 0
Slow I²C bus blocked. Remove all Slow I²C bus IC's one-by-one until Error 65 disappears. See the I²C bus overview for the IC's connected to this bus.
ERROR 67
ERROR 68
G
ERROR 70
Vertical Fly Back fail protection. Check/replace (A3);frame IC TDA8177 IC7600
ERROR 71
Horizontal Fly Back fail protection Check/Replace (A1);Line deflection circuit
ERROR 73
Line Deflection Protection. Check/Replace (A1); Line deflection circuit, East/West circuit and IC7484.
ERROR 74
Beam Current protection. Check/ Replace TS7351 (K6);and (A1);Lot pin10 (F);RGB amplifiers
ERROR 76
DC Sound Protection. Check/Replace (B);+Vs and -Vs, (A4);+7V7 and -7V7, (A4);Audio Amplifiers 7740-7770 (N17);Power Supply protection MCS
ERROR 77
FBX protection. Check/Replace (L);Feature Box or use Compair
ERROR 78
SEDSP Dolby decoder protection. Check/replace (A4);+3V supply SEDSP
ERROR 80
TUNER protection. Check/replace (K1); +8V supply Tuner

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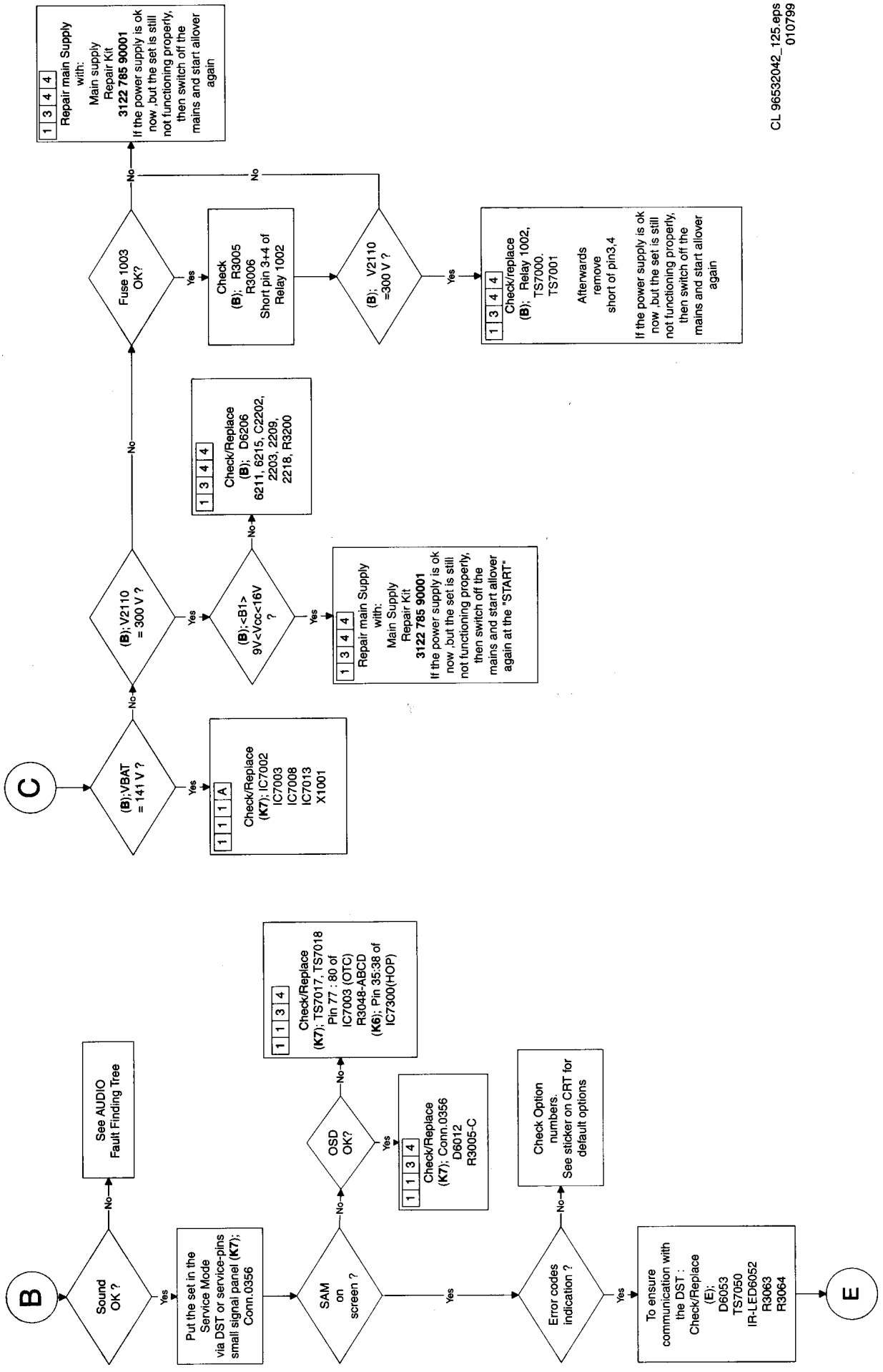
B
Sound OK ?
No
See AUDIO Fault Finding Tree
Yes
Put the set in the Service Mode via DST or service-pins small signal panel (K7); Conn.0356
SAM on screen ?
No
OSD OK?
No
1 1 3 4
Check/Replace (K7); TS7017, TS7018 Pin 77 : 80 of IC7003 (OTC) R3048-ABCD (K6); Pin 35:38 of IC7300(HOP)
Yes
1 1 1 4
Check/Replace (K7); Conn.0356 D6012 R3005-C
Yes
Error codes indication ?
No
Check Option numbers. See sticker on CRT for default options
Yes
To ensure communication with the DST : Check/Replace (E); D6053 TS7050 IR-LED6052 R3063 R3064
E
C
(B);VBAT = 141 V ?
No
1 1 1 A
Check/Replace (K7); IC7002 IC7003 IC7008 IC7013 X1001
Yes
(B);V2110 = 300 V ?
No
(B);<B1> 9V<Vcc<16V ?
No
1 3 4 4
Check/Replace (B); D6206 6211, 6215, C2202, 2203, 2209, 2218, R3200
Yes
1 3 4 4
Repair main Supply with: Main Supply Repair Kit 3122 785 90001 If the power supply is ok now ,but the set is still not functioning properly, then switch off the mains and start allover again at the "START"
Yes
Fuse 1003 OK?
No
1 3 4 4
Repair main Supply with: Main supply Repair Kit 3122 785 90001 If the power supply is ok now ,but the set is still not functioning properly, then switch off the mains and start allover again
Yes
Check (B); R3005 R3006 Short pin 3+4 of Relay 1002
(B); V2110 =300 V ?
No
Yes
1 3 4 4
Check/replace (B); Relay 1002, TS7000. TS7001
Afterwards remove short of pin3,4
If the power supply is ok now ,but the set is still not functioning properly, then switch off the mains and start allover again

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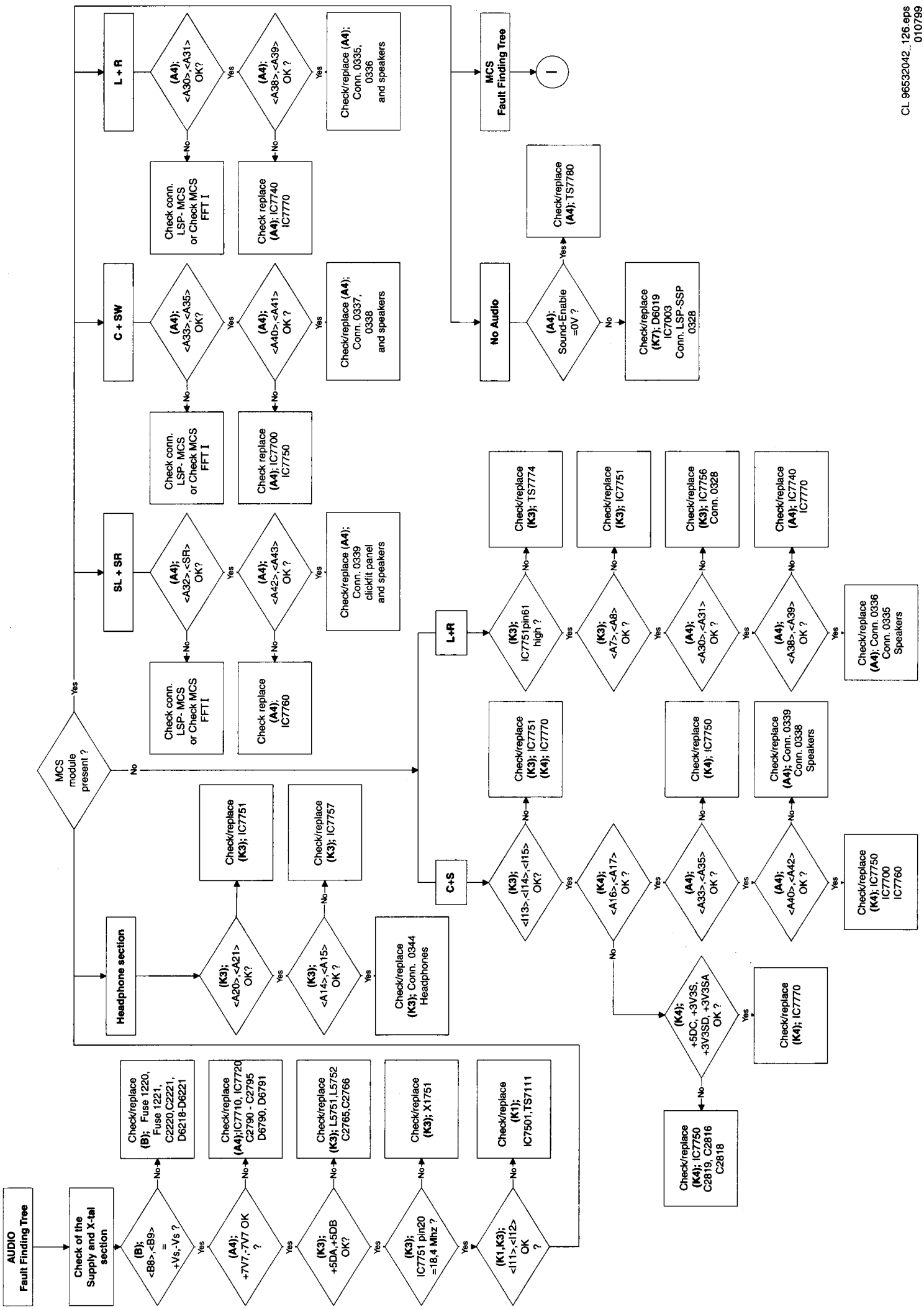
AUDIO
Fault Finding Tree
Check of the Supply and X-tal section
(B); <B8>,<B9> = +Vs,-Vs ?
Check/replace (B); Fuse 1220, Fuse 1221, C2220,C2221, D6218-D6221
(A4); +7V7,-7V7 OK ?
Check/replace (A4);IC7710, IC7720 C2790 - C2795 D6790, D6791
(K3); +5DA,+5DB OK?
Check/replace (K3); L5751,L5752 C2765,C2766
(K3); IC7751 pin20 =18,4 Mhz ?
Check/replace (K3); X1751
(K1,K3); <I11>,<I12> OK ?
Check/replace (K1); IC7501,TS7111
MCS module present ?
Yes
No
Headphone section
(K3); <A20>,<A21> OK?
Check/replace (K3); IC7751
(K3); <A14> <A15> OK ?
Check/replace (K3); IC7757
Check/replace (K3); Conn. 0344 Headphones
SL + SR
(A4); <A32>,<SR> OK?
Check conn. LSP- MCS or Check MCS FFT I
(A4); <A42>,<A43> OK ?
Check replace (A4); IC7760
Check/replace (A4); Conn. 0339 clickfit panel and speakers
C + SW
(A4); <A33>,<A35> OK?
Check conn. LSP- MCS or Check MCS FFT I
(A4); <A40>,<A41> OK ?
Check replace (A4); IC7700 IC7750
Check/replace (A4); Conn. 0337, 0338 and speakers
L + R
(A4); <A30>,<A31> OK?
Check conn. LSP- MCS or Check MCS FFT I
(A4); <A38>,<A39> OK ?
Check replace (A4); IC7740 IC7770
Check/replace (A4); Conn. 0335, 0336 and speakers
MCS Fault Finding Tree
No Audio
(A4); Sound-Enable =0V ?
Check/replace (A4); TS7780
Check/replace (K7); D6019 IC7003 Conn. LSP-SSP 0328
C+S
(K3); <I13>,<I14>,<I15> OK?
Check/replace (K3); IC7751 (K4); IC7770
(K4); <A16>,<A17> OK ?
Check/replace (K4); IC7750
(A4); <A33>,<A35> OK ?
Check/replace (A4); Conn. 0339 Conn. 0338 Speakers
(A4); <A40>,<A42> OK ?
Check/replace (K4); IC7750 IC7700 IC7760
(K4); +5DC, +3V3S, +3V3SD, +3V3SA OK ?
Check/replace (K4); IC7750 IC2819, C2816 C2818
Check/replace (K4); IC7770
L+R
(K3); IC7751pin61 high ?
Check/replace (K3); TS7774
(K3); <A7>,<A8> OK ?
Check/replace (K3); IC7751
(A4); <A30>,<A31> OK ?
Check/replace (K3); IC7756 Conn. 0328
(A4); <A38>,<A39> OK ?
Check/replace (A4); IC7740 IC7770
Check/replace (A4); Conn. 0336 Conn. 0335 Speakers
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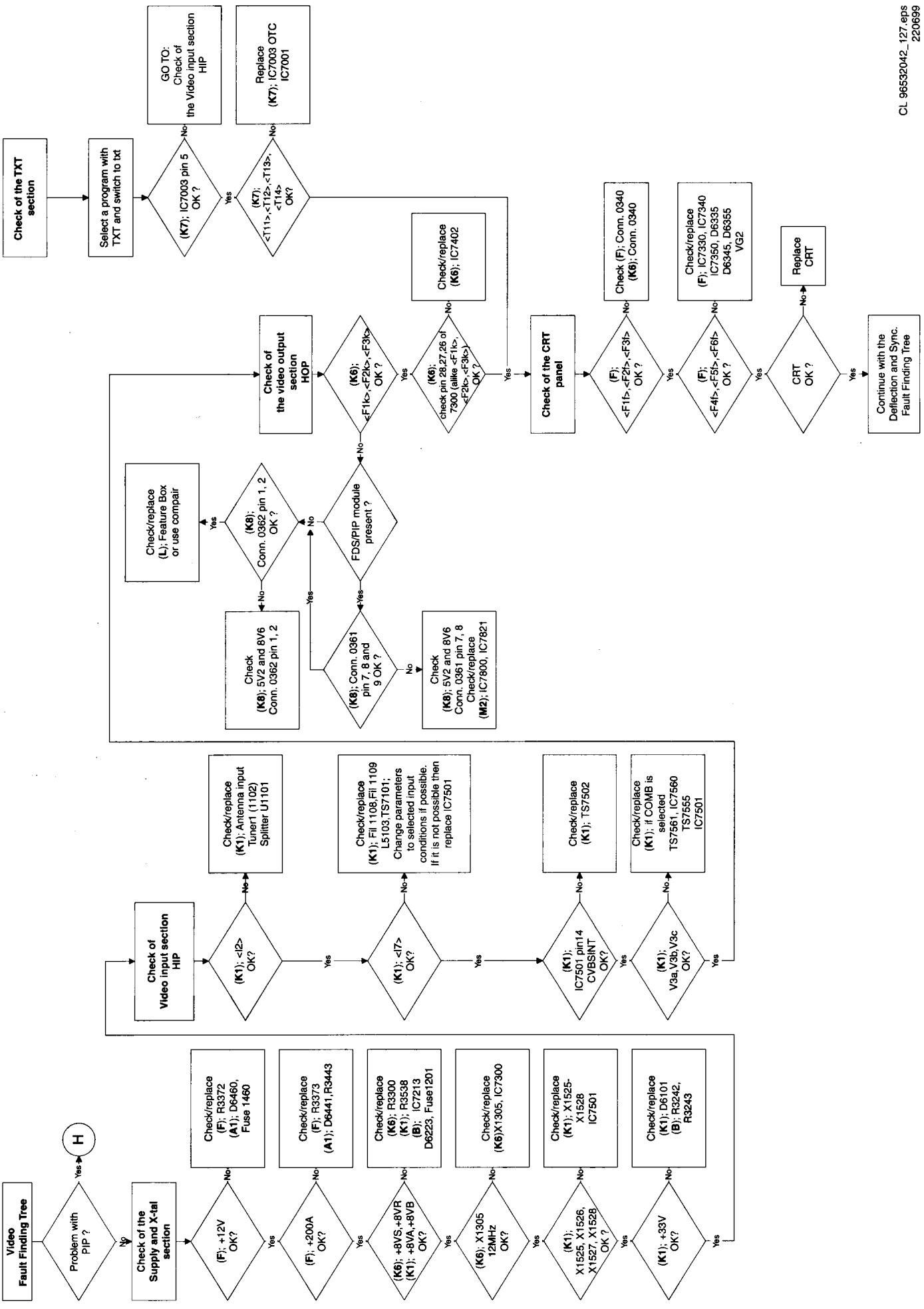

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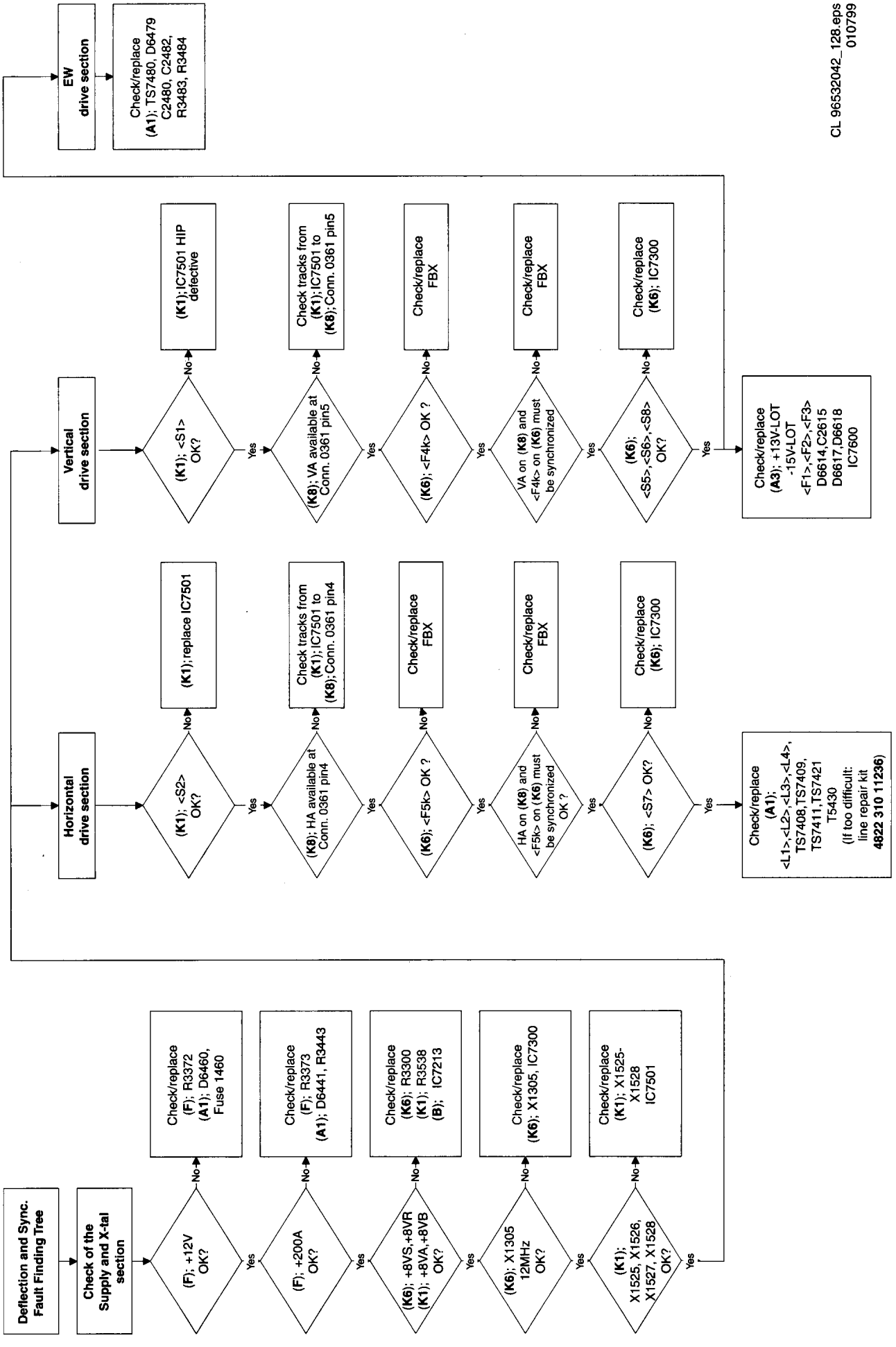
Deflection and Sync. Fault Finding Tree
Check of the Supply and X-tal section
(F); +12V OK?
Check/replace (F); R3372 (A1); D6460, Fuse 1460
(F); +200A OK?
Check/replace (F); R3373 (A1); D6441, R3443
(K6); +8VS,+8VR (K1); +8VA,+8VB OK?
Check/replace (K6); R3300 (K1); R3538 (B); IC7213
(K6); X1305 12MHz OK?
Check/replace (K6); X1305, IC7300
(K1); X1525, X1526, X1527, X1528 OK?
Check/replace (K1); X1525-X1528 IC7501
Horizontal drive section
(K1); <S2> OK?
(K1); replace IC7501
(K8); HA available at Conn. 0361 pin4
Check tracks from (K1); IC7501 to (K8); Conn. 0361 pin4
(K6); <F5k> OK ?
Check/replace FBX
HA on (K8) and <F5k> on (K6) must be synchronized OK ?
Check/replace FBX
(K6); <S7> OK?
Check/replace (K6); IC7300
Check/replace (A1); <L1>,<L2>,<L3>,<L4>, TS7408,TS7409, TS7411,TS7421 T5430 (If too difficult: line repair kit 4822 310 11236)
Vertical drive section
(K1); <S1> OK?
(K1);IC7501 HIP defective
(K8); VA available at Conn. 0361 pin5
Check tracks from (K1);IC7501 to (K8);Conn. 0361 pin5
(K6); <F4k> OK ?
Check/replace FBX
VA on (K8) and <F4k> on (K6) must be synchronized
Check/replace FBX
(K6); <S5>,<S6>,<S8> OK?
Check/replace (K6); IC7300
Check/replace (A3); +13V-LOT -15V-LOT <F1>,<F2>,<F3> D6614,C2615 D6617,D6618 IC7600
EW drive section
Check/replace (A1); TS7480, D6479 C2480, C2482, R3483, R3484
No
Yes

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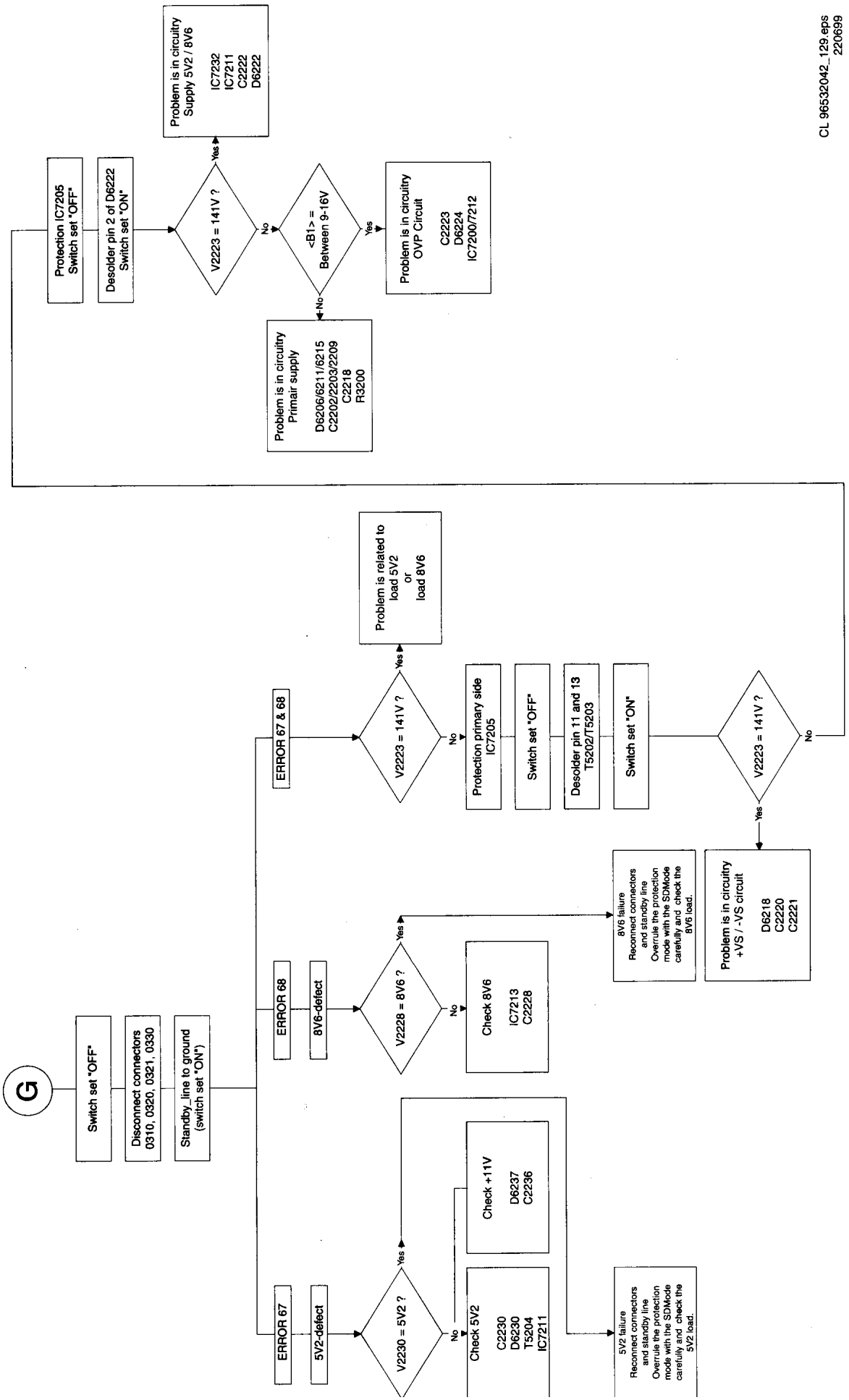

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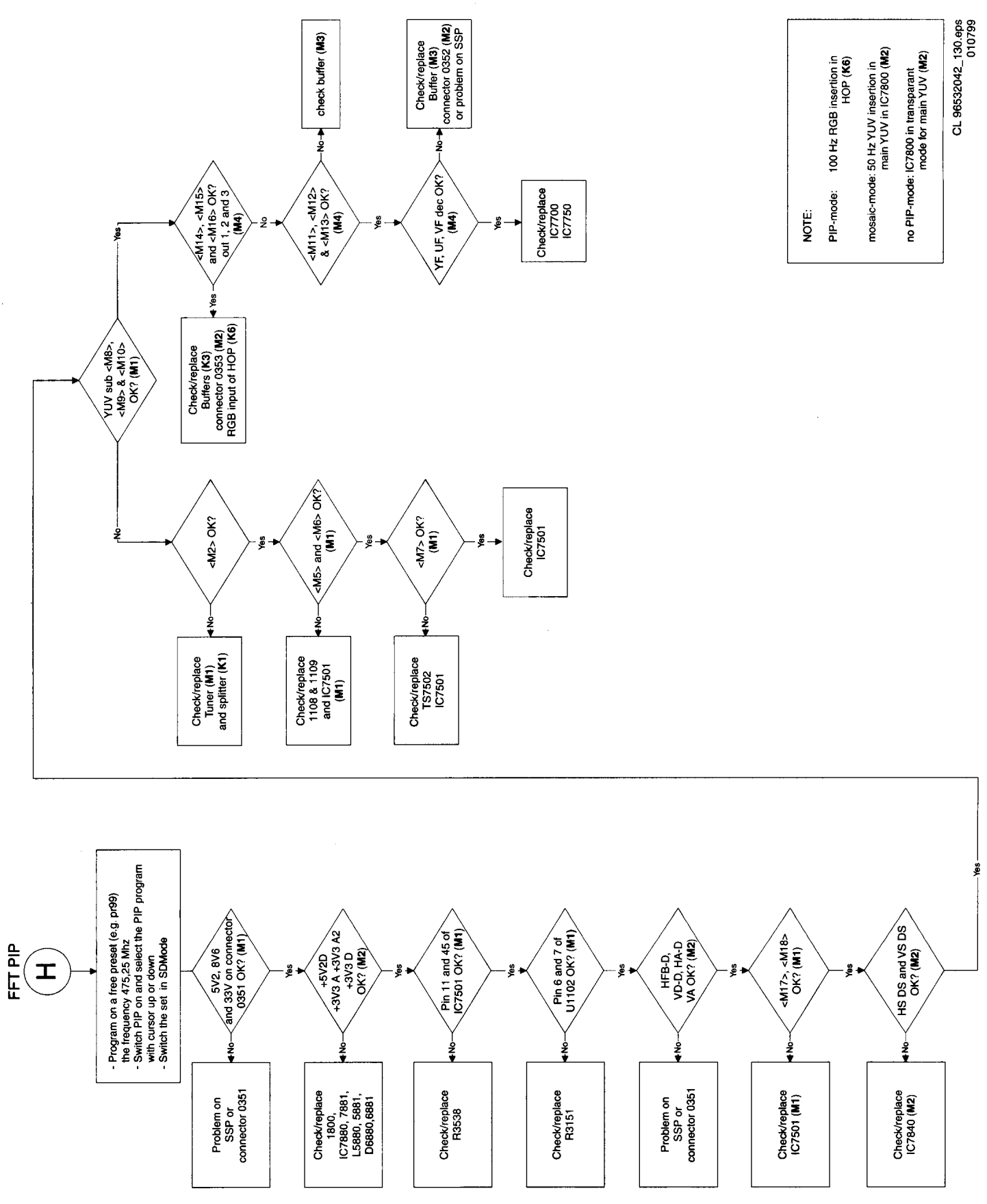
FFT PIP
H
- Program on a free preset (e.g. pr99) the frequency 475,25 Mhz
- Switch PIP on and select the PIP program with cursor up or down
- Switch the set in SDMode
5V2, 8V6 and 33V on connector 0351 OK? (M1)
Problem on SSP or connector 0351
+5V2D +3V3 A +3V3 A2 +3V3 D OK? (M2)
Check/replace 1800, IC7880, 7881, L5880, 5881, D6880,6881
Pin 11 and 45 of IC7501 OK? (M1)
Check/replace R3538
Pin 6 and 7 of U1102 OK? (M1)
Check/replace R3151
HFB-D, VD-D, HA-D VA OK? (M2)
Problem on SSP or connector 0351
<M17>, <M18> OK? (M1)
Check/replace IC7501 (M1)
HS DS and VS DS OK? (M2)
Check/replace IC7840 (M2)
YUV sub <M8>, <M9> & <M10> OK? (M1)
<M2> OK?
Check/replace Tuner (M1) and splitter (K1)
<M5> and <M6> OK? (M1)
Check/replace 1108 & 1109 and IC7501 (M1)
<M7> OK? (M1)
Check/replace TS7502 IC7501
Check/replace IC7501
<M14>, <M15> and <M16> OK? out 1, 2 and 3 (M4)
Check/replace Buffers (K3) connector 0353 (M2) RGB input of HOP (K6)
<M11>, <M12> & <M13> OK? (M4)
check buffer (M3)
YF, UF, VF dec OK? (M4)
Check/replace Buffer (M3) connector 0352 (M2) or problem on SSP
Check/replace IC7700 IC7750
NOTE:
PIP-mode: 100 Hz RGB insertion in HOP (K6)
mosaic-mode: 50 Hz YUV insertion in main YUV in IC7800 (M2)
no PIP-mode: IC7800 in transparant mode for main YUV (M2)
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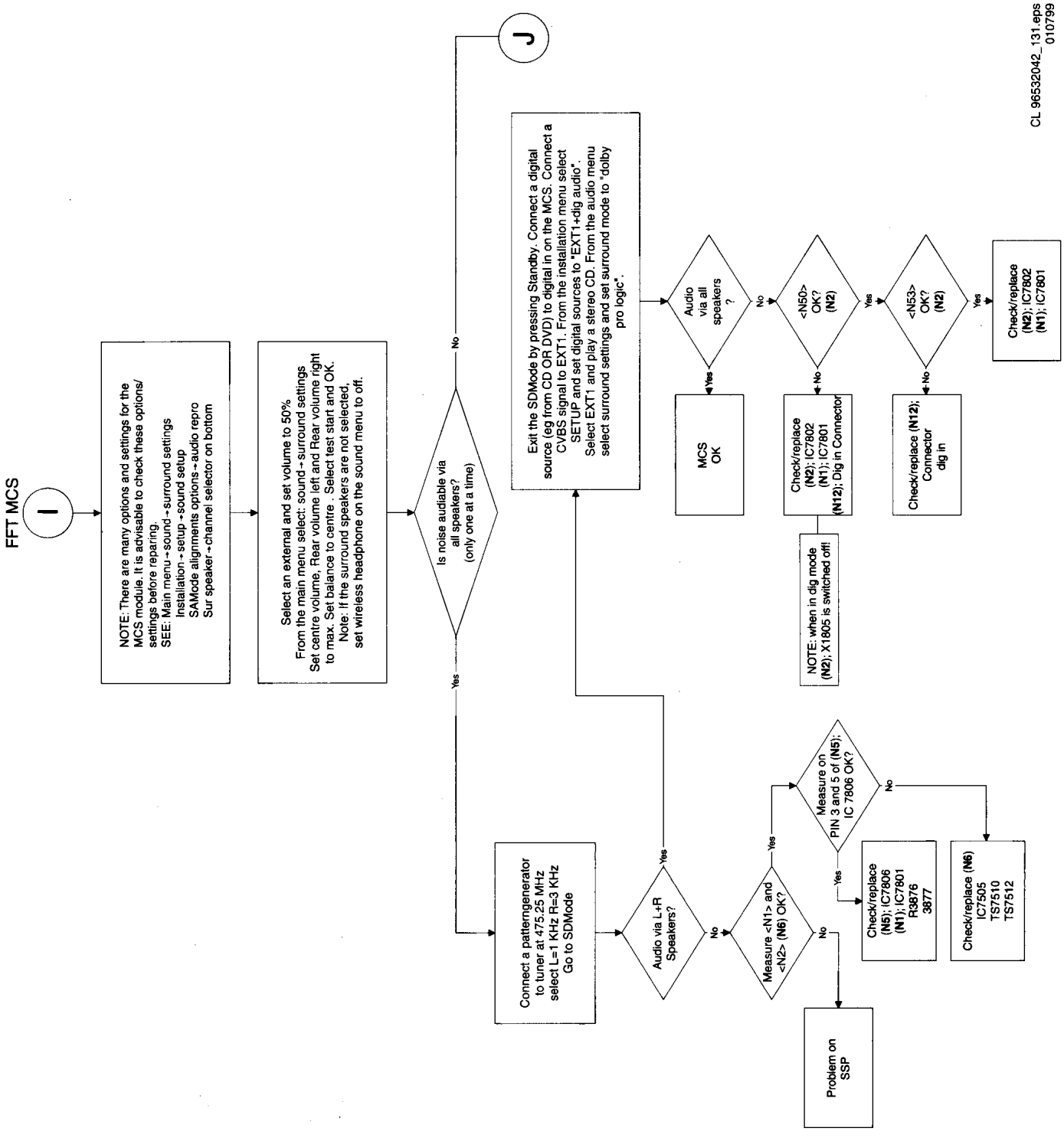
FFT MCS
I
NOTE: There are many options and settings for the MCS module. It is advisable to check these options/ settings before repairing.
SEE: Main menu→sound→surround settings
Installation→setup→sound setup
SAMode alignments options→audio repro
Sur speaker→channel selector on bottom
Select an external and set volume to 50%
From the main menu select: sound→surround settings
Set centre volume, Rear volume left and Rear volume right to max. Set balance to centre . Select test start and OK.
Note: If the surround speakers are not selected, set wireless headphone on the sound menu to off.
Is noise audiable via all speakers? (only one at a time)
Yes
No
J
Exit the SDMode by pressing Standby. Connect a digital source (eg from CD OR DVD) to digital in on the MCS. Connect a CVBS signal to EXT1. From the installation menu select SETUP and set digital sources to "EXT1+dig audio". Select EXT1 and play a stereo CD. From the audio menu select surround settings and set surround mode to 'dolby pro logic".
Audio via all speakers ?
Yes
No
MCS OK
<N50> OK? (N2)
Yes
No
Check/replace (N2); IC7802 (N1); IC7801 (N12); Dig in Connector
NOTE: when in dig mode (N2); X1805 is switched off
<N53> OK? (N2)
Yes
No
Check/replace (N12); Connector dig in
Check/replace (N2); IC7802 (N1); IC7801
Connect a patterngenerator to tuner at 475.25 MHz select L=1 KHz R=3 KHz Go to SDMode
Audio via L+R Speakers?
Yes
No
Measure <N1> and <N2> (N6) OK?
Yes
No
Problem on SSP
Measure on PIN 3 and 5 of (N5); IC 7806 OK?
Yes
No
Check/replace (N5); IC7806 (N1); IC7801 R3876 3877
Check/replace (N6) IC7505 TS7510 TS7512
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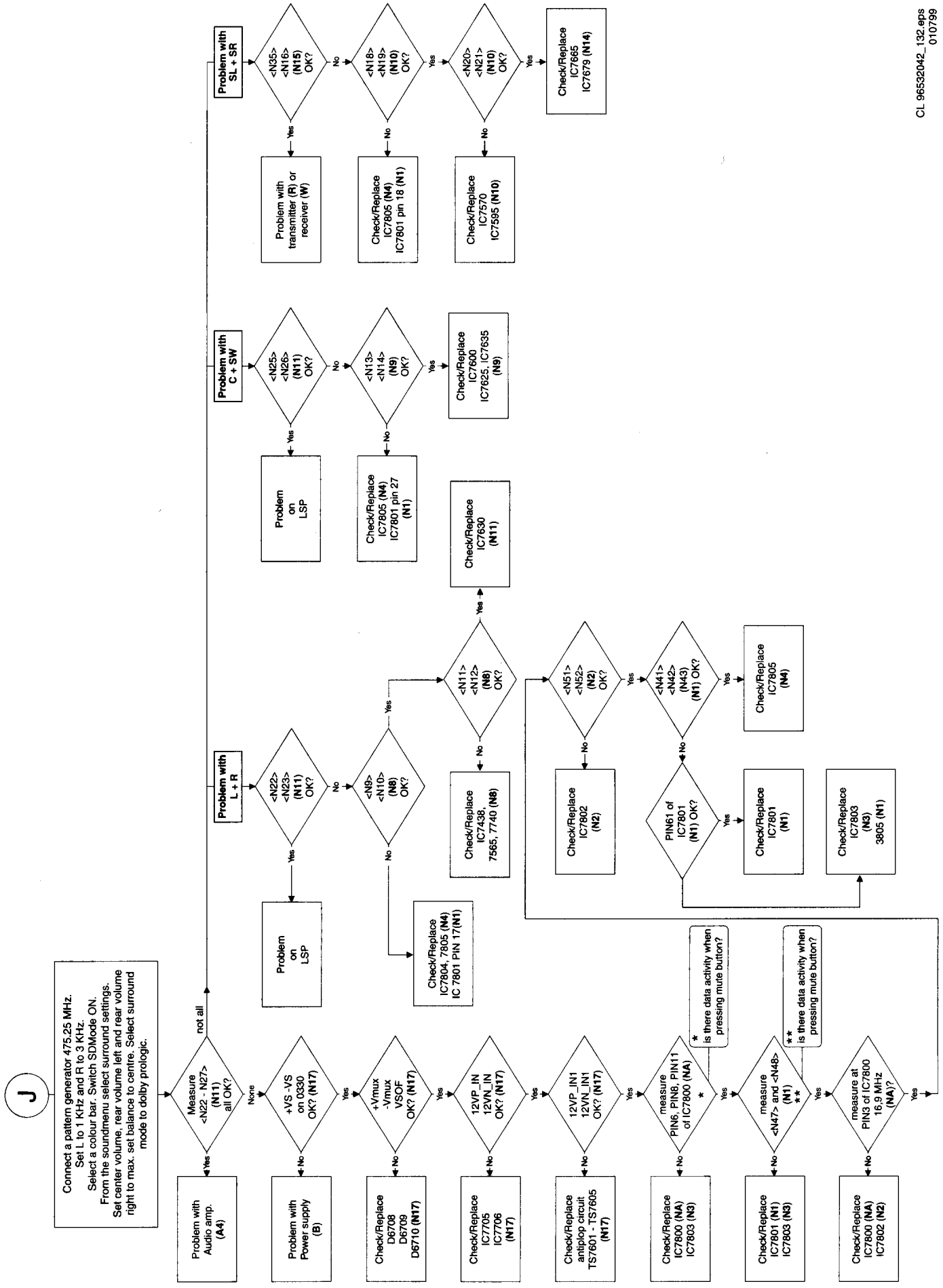

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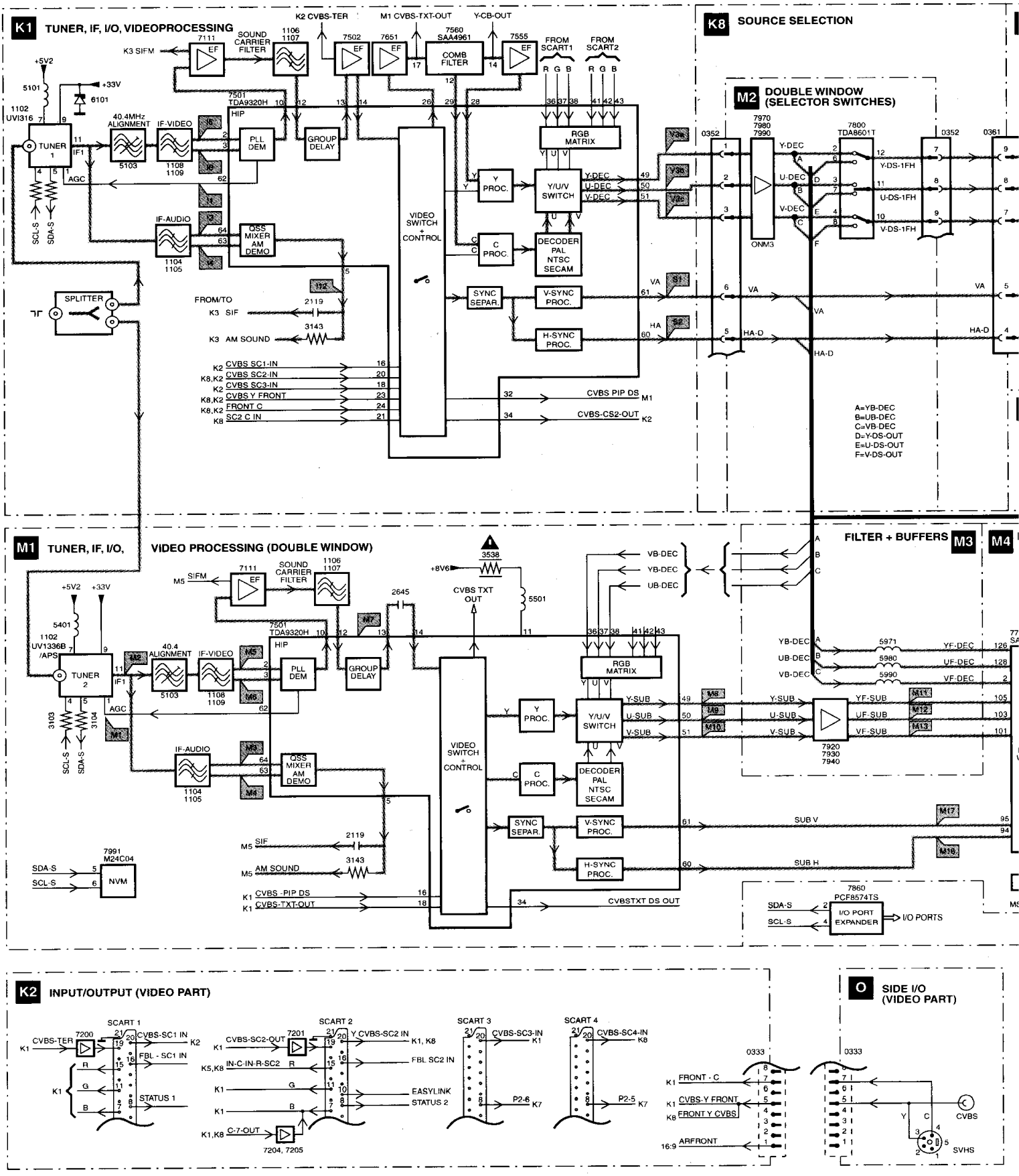
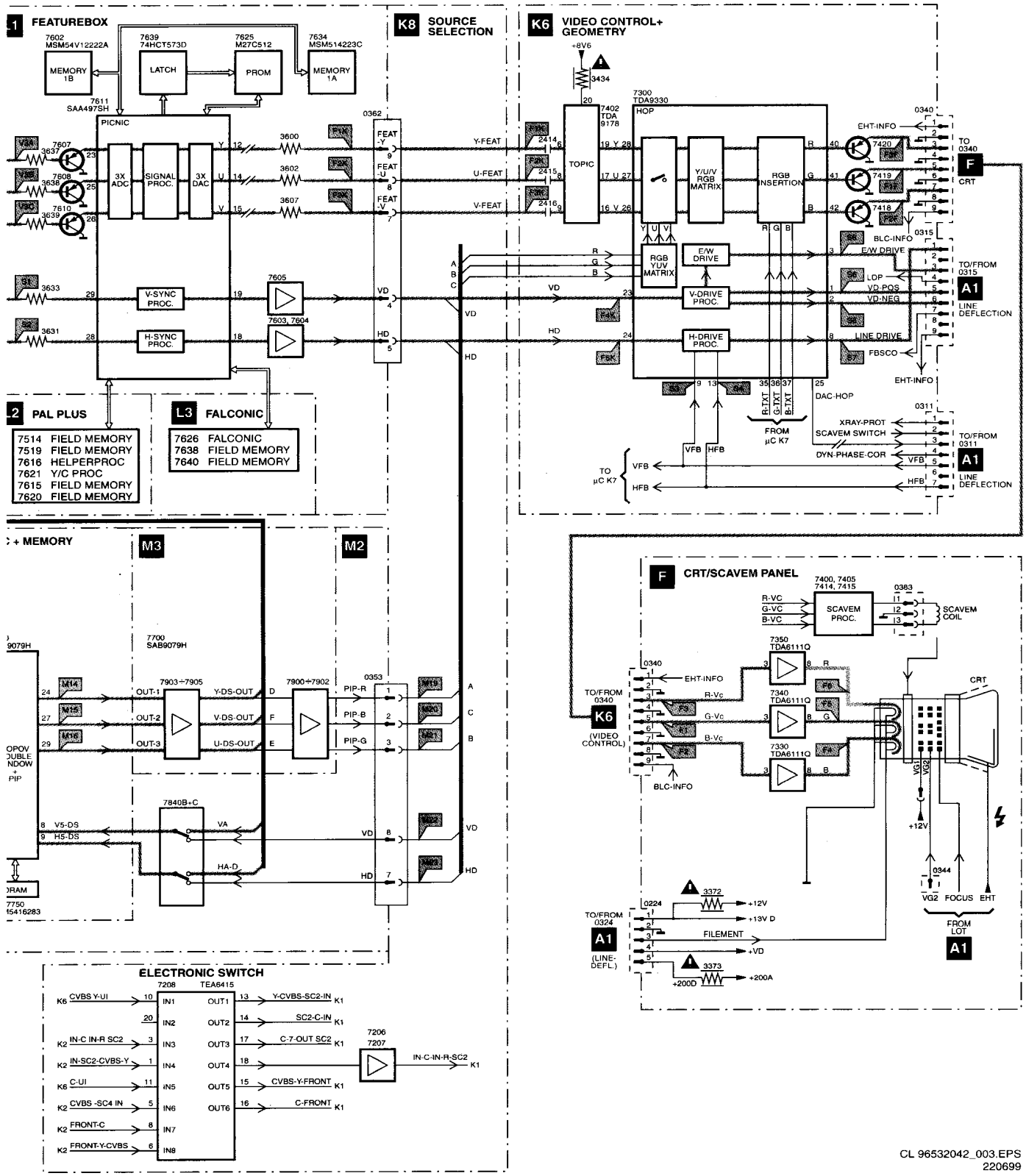
Videosignal flows





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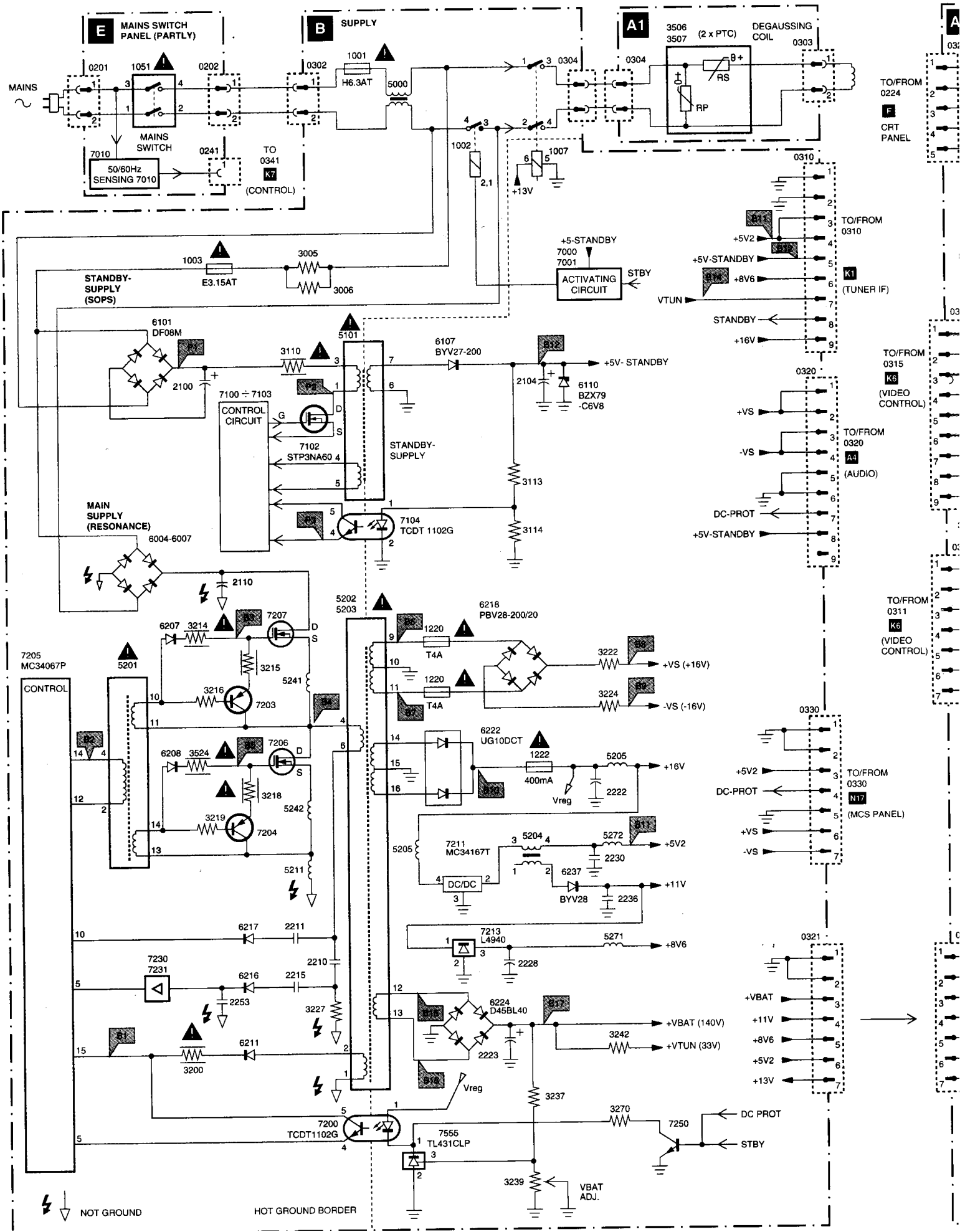
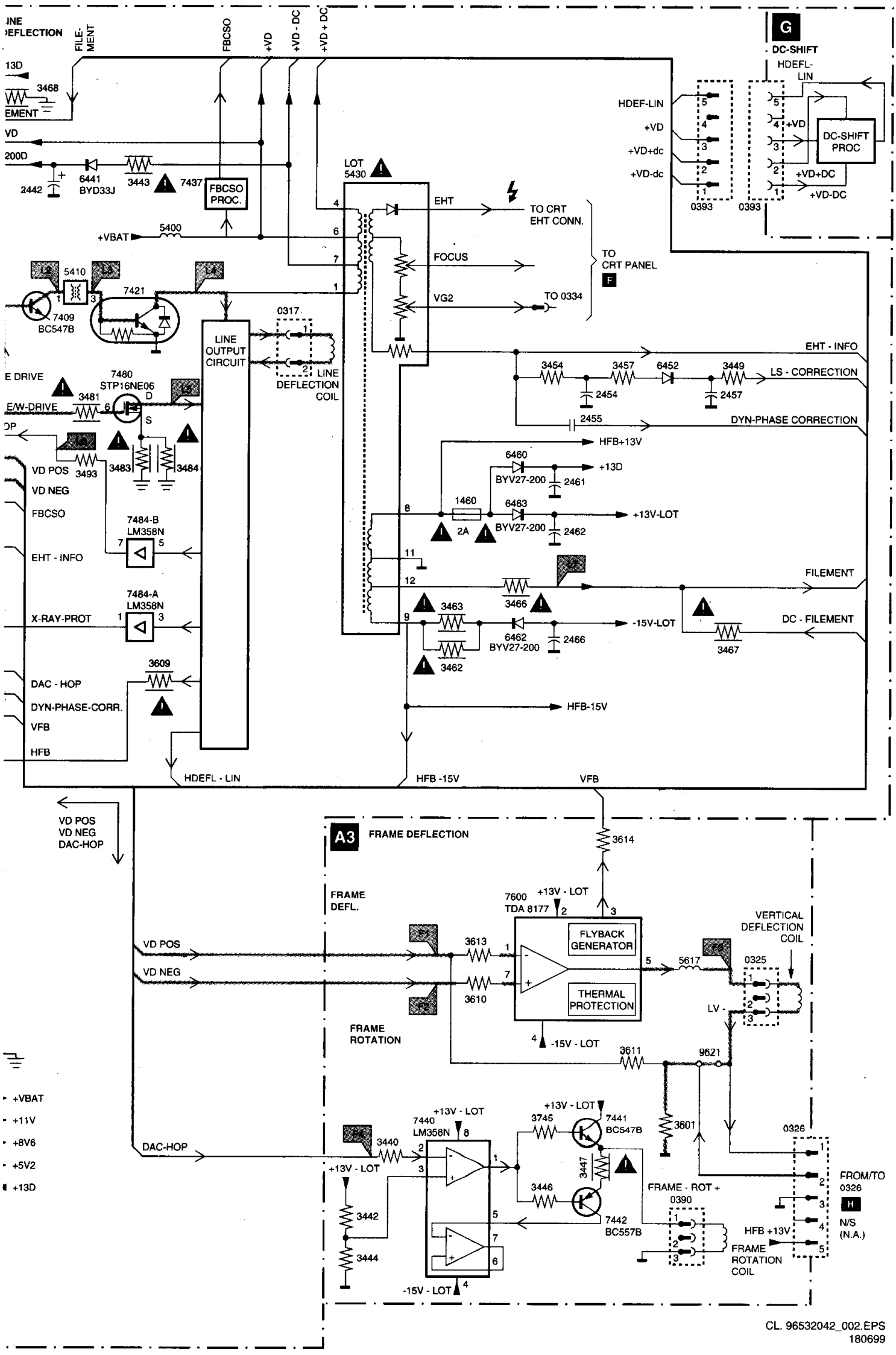
6. Block diagrams, Testpoint overviews and Waveforms

Blockdiagram Supply and Deflection





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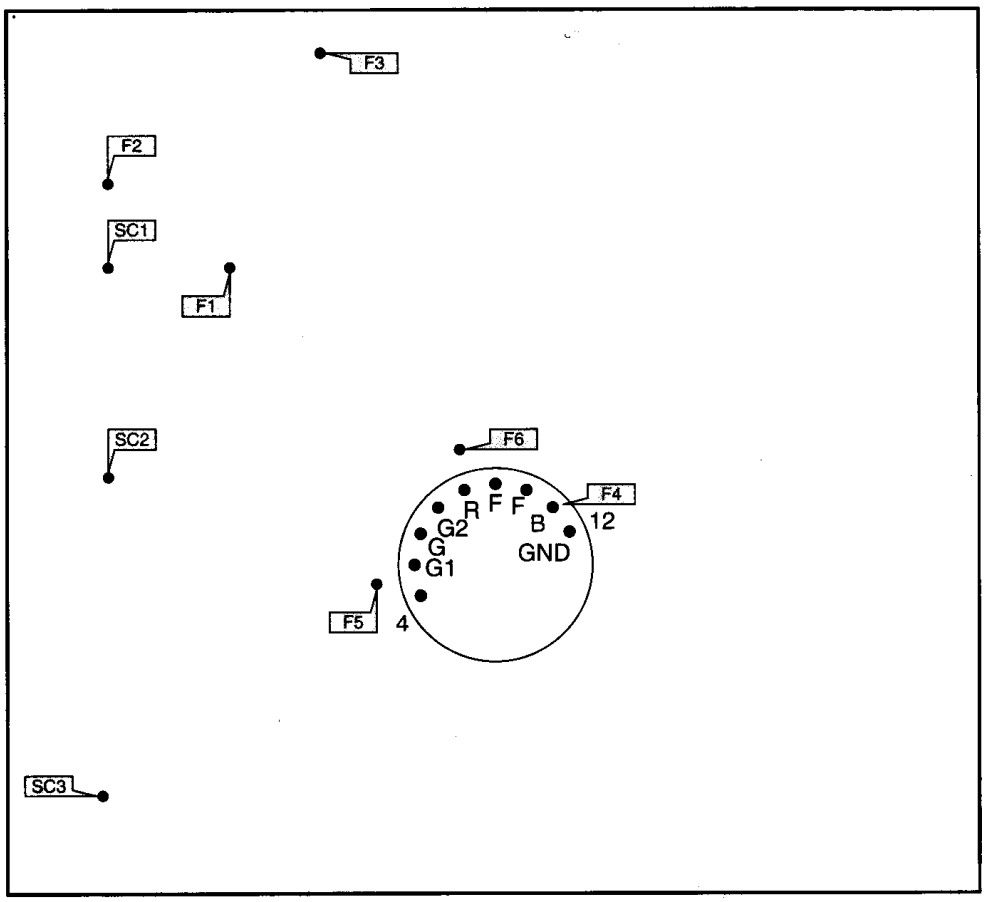
CRT / SCAVEM panel (F)



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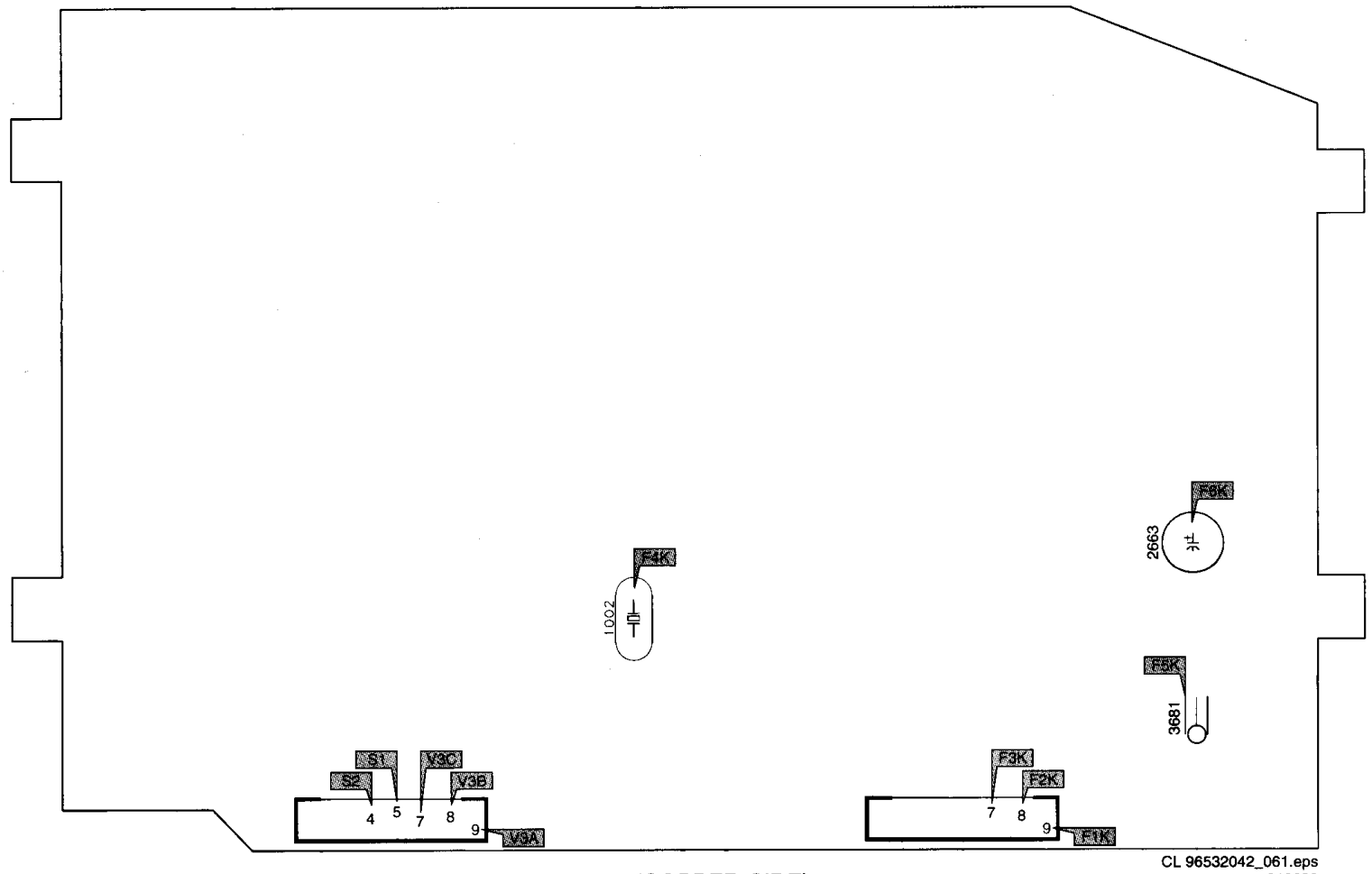
FBX panel (L)



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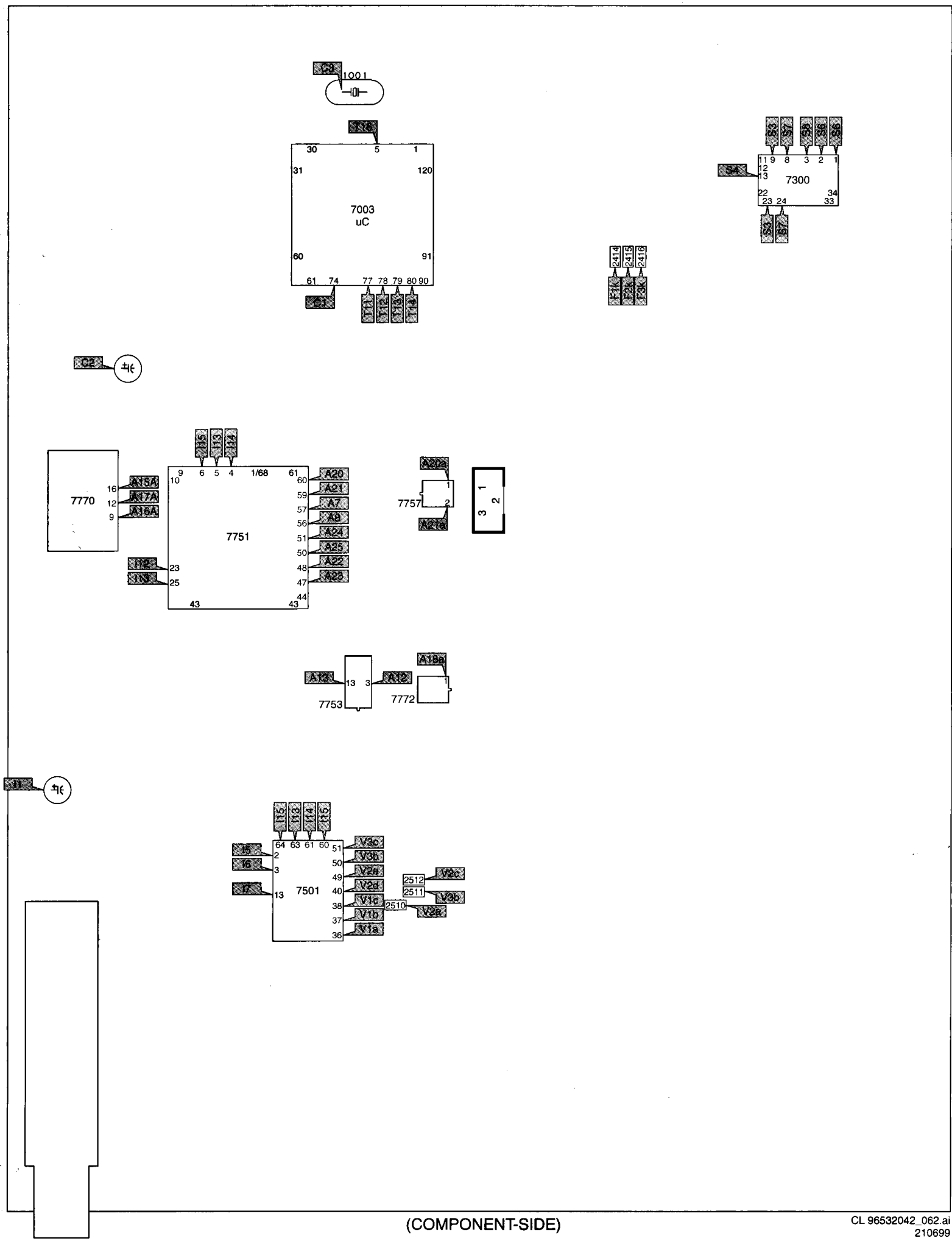
Small signal panel (K)



(COMPONENT-SIDE)

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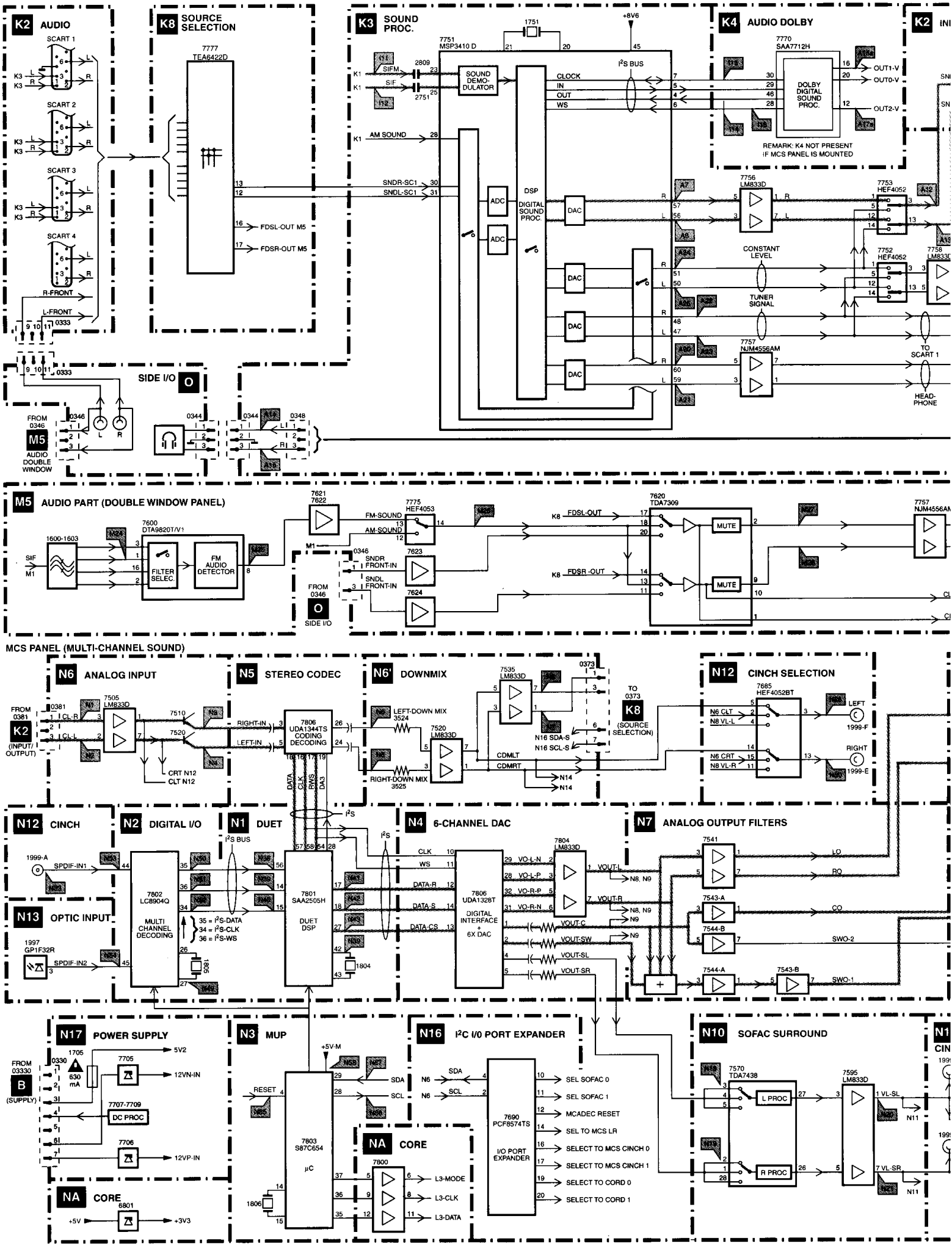
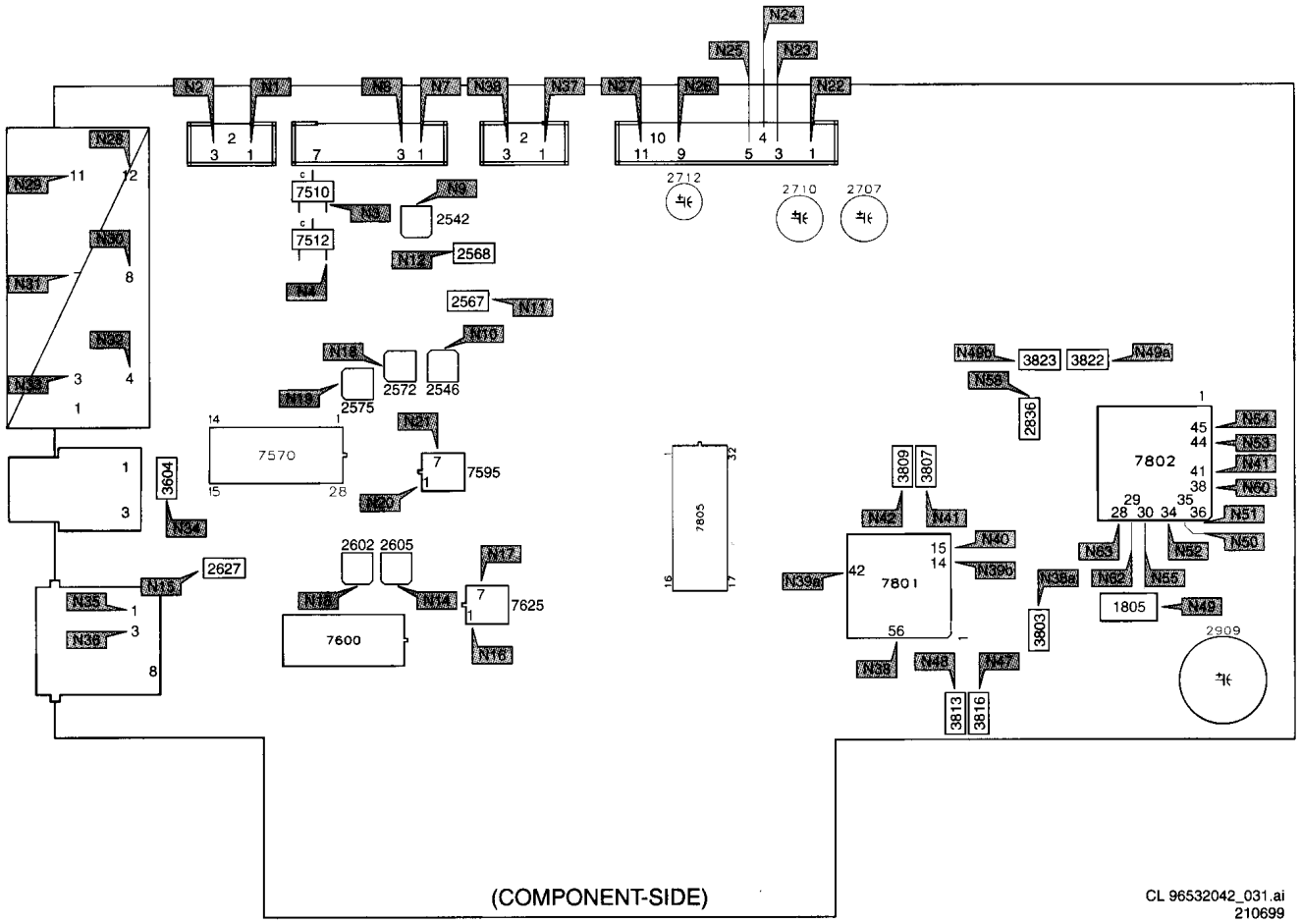
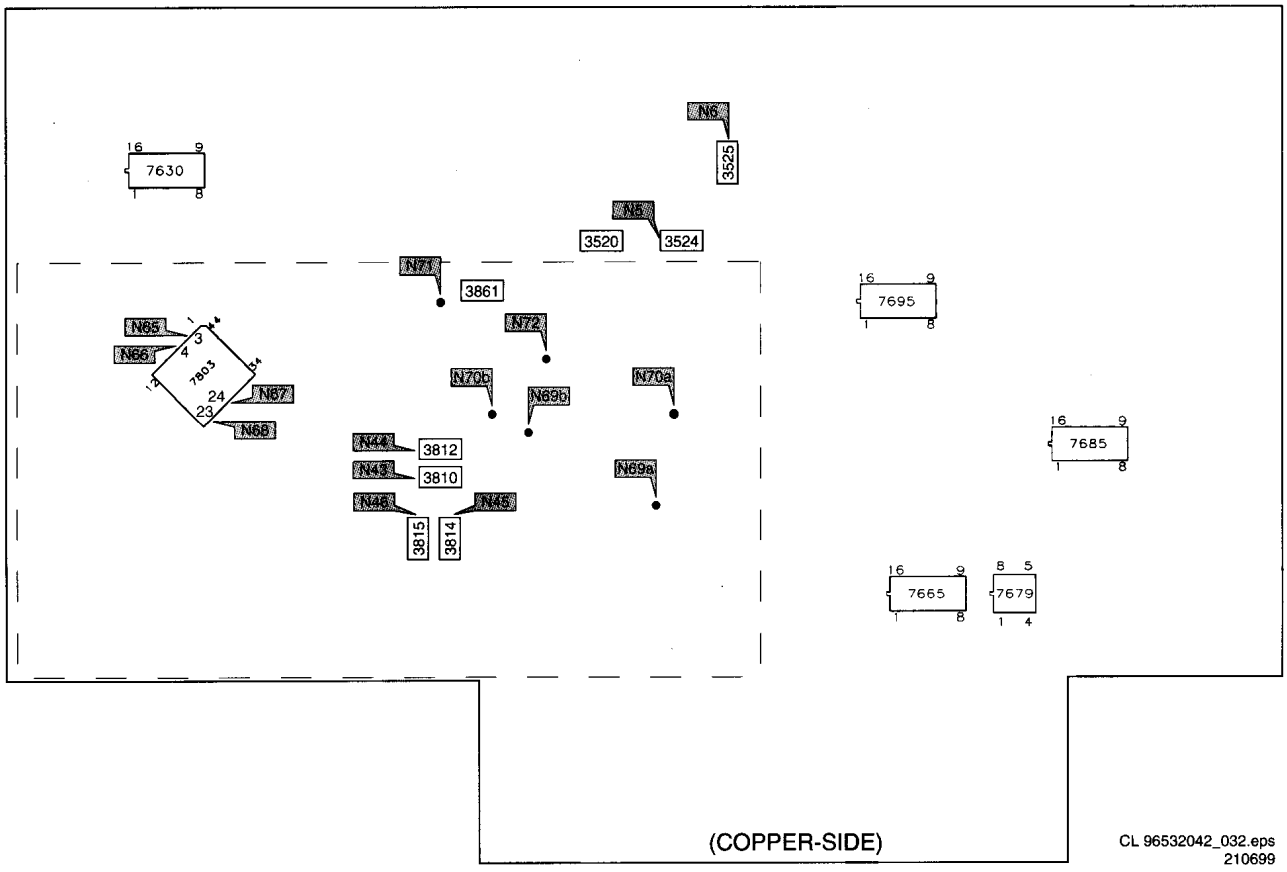
Audiosignal flows



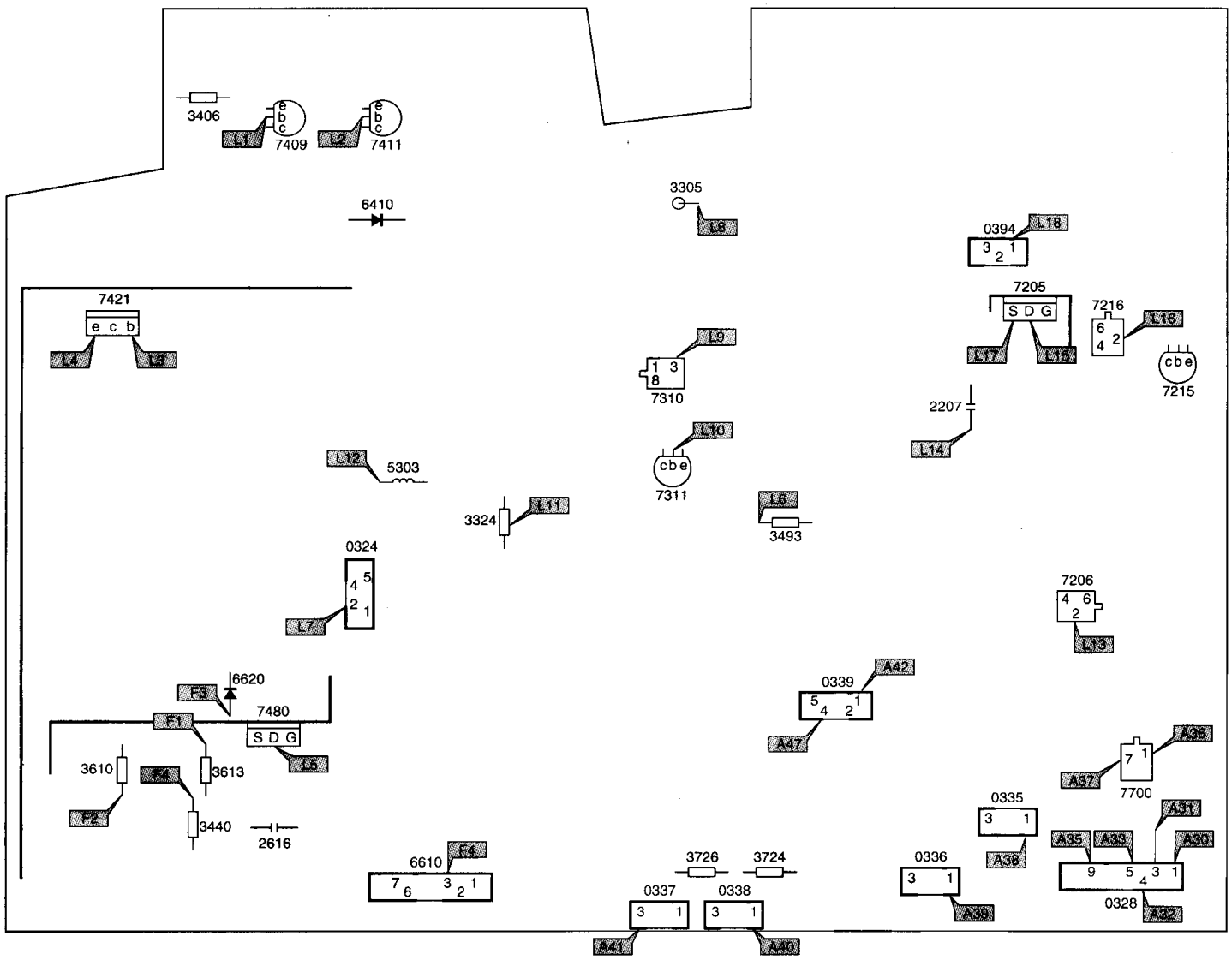
MCS module (N)



MCS module (N)



Large signal panel (A)



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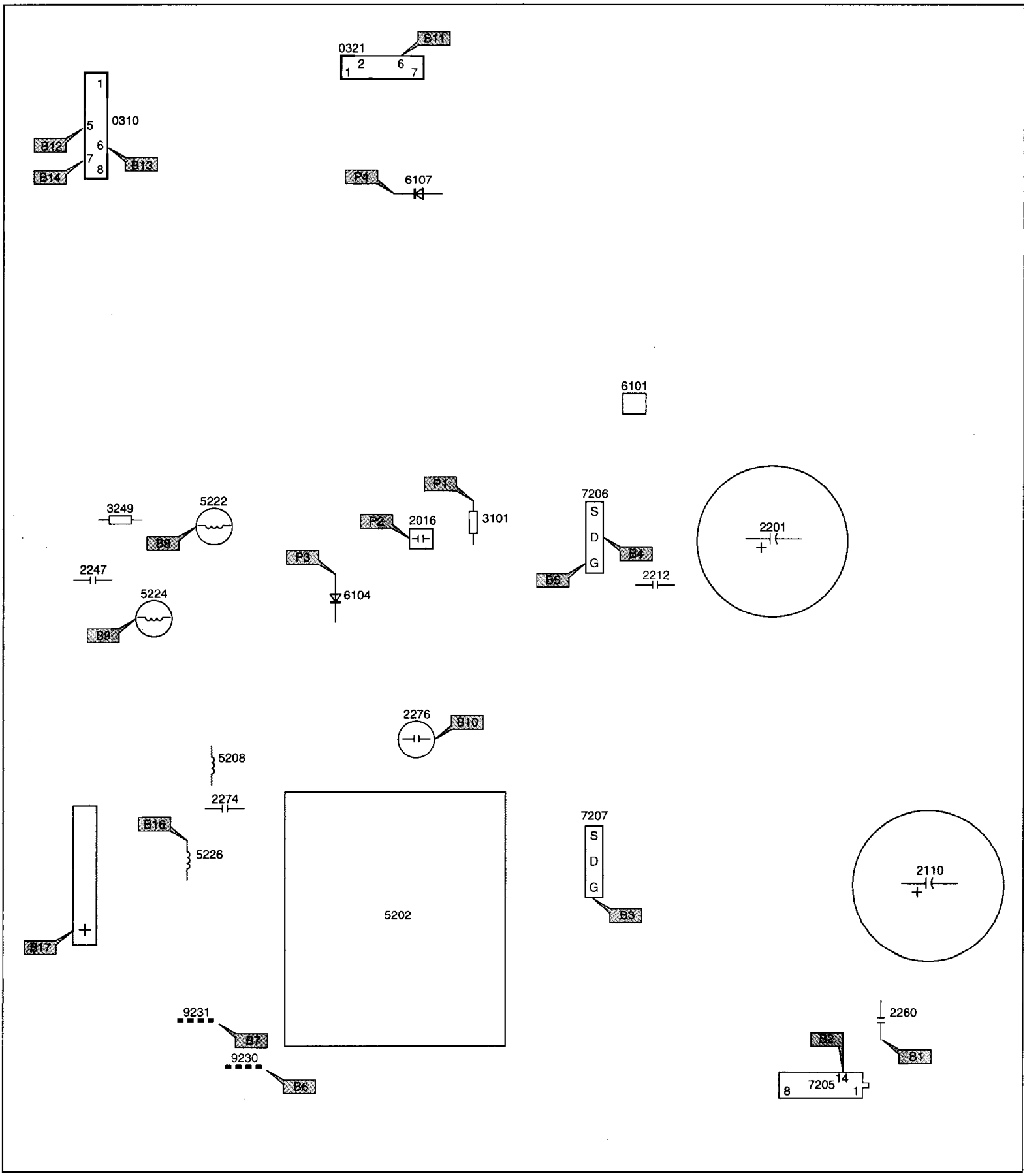
Top supply (B)



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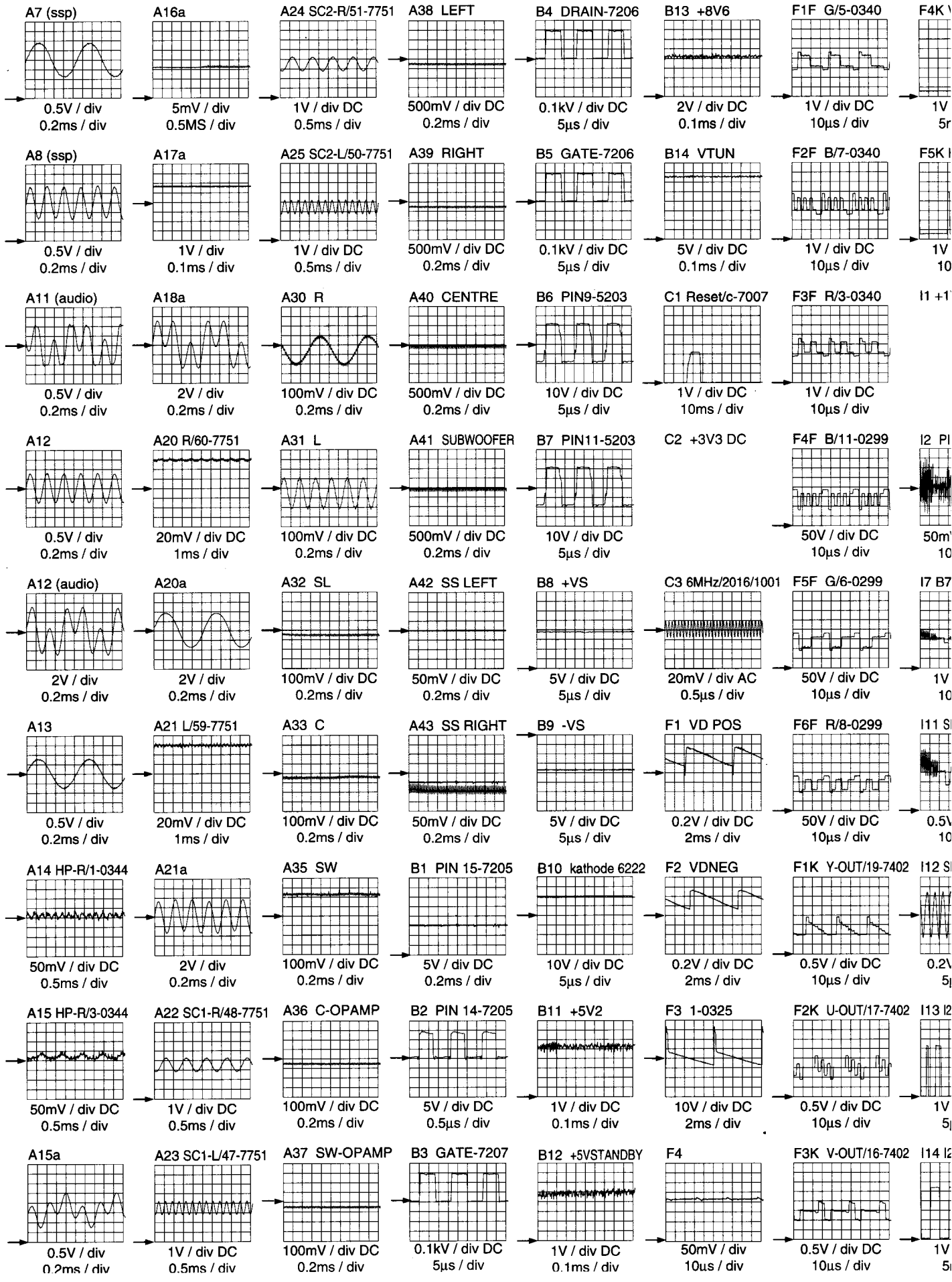
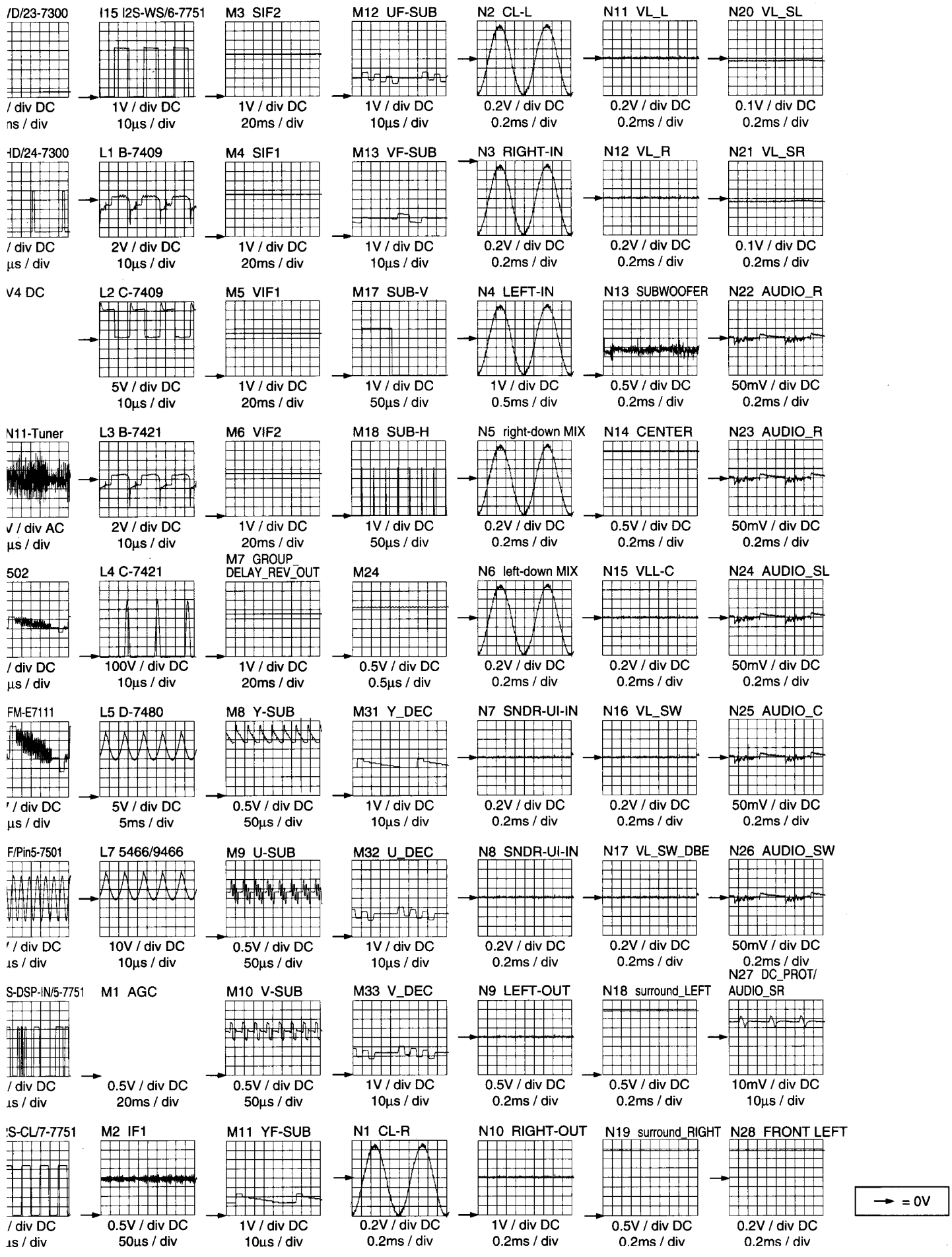
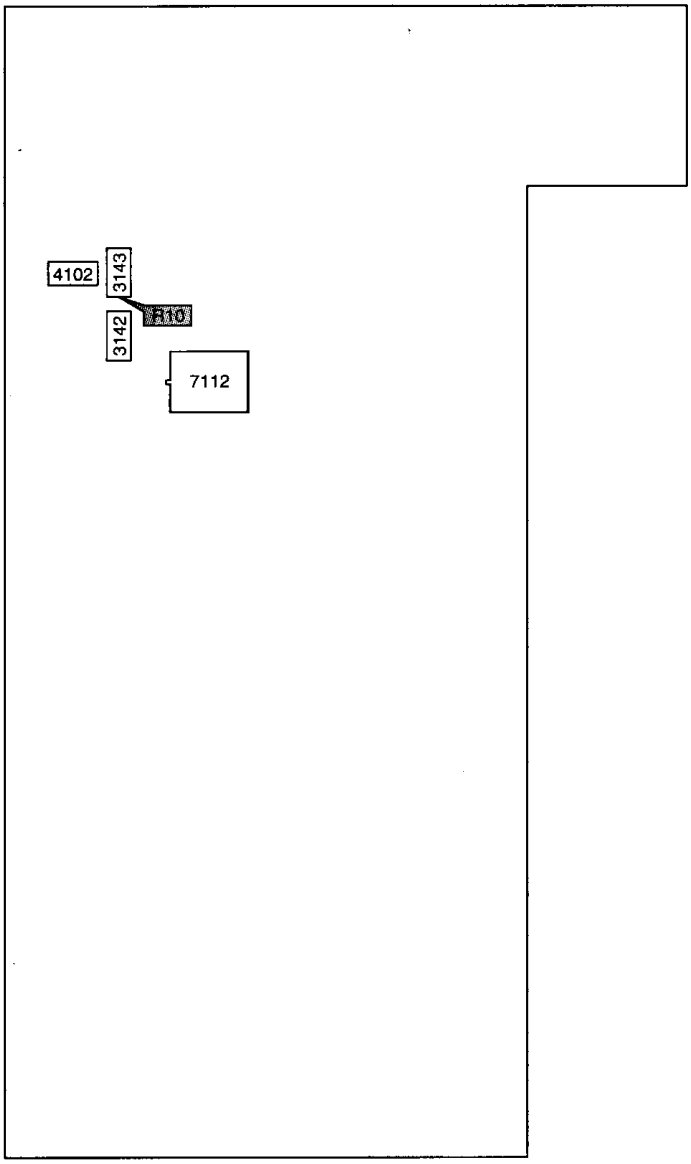
Waveforms


A7 (ssp)
0.5V / div
0.2ms / div
A16a
5mV / div
0.5MS / div
A24 SC2-R/51-7751
1V / div DC
0.5ms / div
A38 LEFT
500mV / div DC
0.2ms / div
B4 DRAIN-7206
0.1kV / div DC
5µs / div
B13 +8V6
2V / div DC
0.1ms / div
F1F G/5-0340
1V / div DC
10µs / div
A8 (ssp)
0.5V / div
0.2ms / div
A17a
1V / div
0.1ms / div
A25 SC2-L/50-7751
1V / div DC
0.5ms / div
A39 RIGHT
500mV / div DC
0.2ms / div
B5 GATE-7206
0.1kV / div DC
5µs / div
B14 VTUN
5V / div DC
0.1ms / div
F2F B/7-0340
1V / div DC
10µs / div
A11 (audio)
0.5V / div
0.2ms / div
A18a
2V / div
0.2ms / div
A30 R
100mV / div DC
0.2ms / div
A40 CENTRE
500mV / div DC
0.2ms / div
B6 PIN9-5203
10V / div DC
5µs / div
C1 Reset/c-7007
1V / div DC
10ms / div
F3F R/3-0340
1V / div DC
10µs / div
A12
0.5V / div
0.2ms / div
A20 R/60-7751
20mV / div DC
1ms / div
A31 L
100mV / div DC
0.2ms / div
A41 SUBWOOFER
500mV / div DC
0.2ms / div
B7 PIN11-5203
10V / div DC
5µs / div
C2 +3V3 DC
F4F B/11-0299
50V / div DC
10µs / div
A12 (audio)
2V / div
0.2ms / div
A20a
2V / div
0.2ms / div
A32 SL
100mV / div DC
0.2ms / div
A42 SS LEFT
50mV / div DC
0.2ms / div
B8 +VS
5V / div DC
5µs / div
C3 6MHz/2016/1001
20mV / div AC
0.5µs / div
F5F G/6-0299
50V / div DC
10µs / div
A13
0.5V / div
0.2ms / div
A21 L/59-7751
20mV / div DC
1ms / div
A33 C
100mV / div DC
0.2ms / div
A43 SS RIGHT
50mV / div DC
0.2ms / div
B9 -VS
5V / div DC
5µs / div
F1 VD POS
0.2V / div DC
2ms / div
F6F R/8-0299
50V / div DC
10µs / div
A14 HP-R/1-0344
50mV / div DC
0.5ms / div
A21a
2V / div
0.2ms / div
A35 SW
100mV / div DC
0.2ms / div
B1 PIN 15-7205
5V / div DC
0.2ms / div
B10 kathode 6222
10V / div DC
5µs / div
F2 VDNEG
0.2V / div DC
2ms / div
F1K Y-OUT/19-7402
0.5V / div DC
10µs / div
A15 HP-R/3-0344
50mV / div DC
0.5ms / div
A22 SC1-R/48-7751
1V / div DC
0.5ms / div
A36 C-OPAMP
100mV / div DC
0.2ms / div
B2 PIN 14-7205
5V / div DC
0.5µs / div
B11 +5V2
1V / div DC
0.1ms / div
F3 1-0325
10V / div DC
2ms / div
F2K U-OUT/17-7402
0.5V / div DC
10µs / div
A15a
0.5V / div
A23 SC1-L/47-7751
1V / div DC
0.5ms / div
A37 SW-OPAMP
100mV / div DC
0.2ms / div
B3 GATE-7207
0.1kV / div DC
5µs / div
B12 +5VSTANDBY
1V / div DC
0.1ms / div
F4
50mV / div
10µs / div
F3K V-OUT/16-7402
0.5V / div DC
10µs / div


/D/23-7300
/ div DC
ns / div
I15 I2S-WS/6-7751
1V / div DC
10µs / div
M3 SIF2
1V / div DC
20ms / div
M12 UF-SUB
1V / div DC
10µs / div
N2 CL-L
0.2V / div DC
0.2ms / div
N11 VL_L
0.2V / div DC
0.2ms / div
N20 VL_SL
0.1V / div DC
0.2ms / div
ID/24-7300
/ div DC
µs / div
L1 B-7409
2V / div DC
10µs / div
M4 SIF1
1V / div DC
20ms / div
M13 VF-SUB
1V / div DC
10µs / div
N3 RIGHT-IN
0.2V / div DC
0.2ms / div
N12 VL_R
0.2V / div DC
0.2ms / div
N21 VL_SR
0.1V / div DC
0.2ms / div
V4 DC
L2 C-7409
5V / div DC
10µs / div
M5 VIF1
1V / div DC
20ms / div
M17 SUB-V
1V / div DC
50µs / div
N4 LEFT-IN
1V / div DC
0.5ms / div
N13 SUBWOOFER
0.5V / div DC
0.2ms / div
N22 AUDIO_R
50mV / div DC
0.2ms / div
N11-Tuner
V / div AC
µs / div
L3 B-7421
2V / div DC
10µs / div
M6 VIF2
1V / div DC
20ms / div
M18 SUB-H
1V / div DC
50µs / div
N5 right-down MIX
0.2V / div DC
0.2ms / div
N14 CENTER
0.5V / div DC
0.2ms / div
N23 AUDIO_R
50mV / div DC
0.2ms / div
502
/ div DC
µs / div
L4 C-7421
100V / div DC
10µs / div
M7 GROUP_
DELAY_REV_OUT
1V / div DC
20ms / div
M24
0.5V / div DC
0.5µs / div
N6 left-down MIX
0.2V / div DC
0.2ms / div
N15 VLL-C
0.2V / div DC
0.2ms / div
N24 AUDIO_SL
50mV / div DC
0.2ms / div
FM-E7111
/ div DC
µs / div
L5 D-7480
5V / div DC
5ms / div
M8 Y-SUB
0.5V / div DC
50µs / div
M31 Y_DEC
1V / div DC
10µs / div
N7 SNDR-UI-IN
0.2V / div DC
0.2ms / div
N16 VL_SW
0.2V / div DC
0.2ms / div
N25 AUDIO_C
50mV / div DC
0.2ms / div
F/Pin5-7501
/ div DC
µs / div
L7 5466/9466
10V / div DC
10µs / div
M9 U-SUB
0.5V / div DC
50µs / div
M32 U_DEC
1V / div DC
10µs / div
N8 SNDR-UI-IN
0.2V / div DC
0.2ms / div
N17 VL_SW_DBE
0.2V / div DC
0.2ms / div
N26 AUDIO_SW
50mV / div DC
0.2ms / div
S-DSP-IN/5-7751
/ div DC
µs / div
M1 AGC
0.5V / div DC
20ms / div
M10 V-SUB
0.5V / div DC
50µs / div
M33 V_DEC
1V / div DC
10µs / div
N9 LEFT-OUT
0.5V / div DC
0.2ms / div
N18 surround_LEFT
0.5V / div DC
0.2ms / div
N27 DC_PROT/
AUDIO_SR
10mV / div DC
10µs / div
S-CL/7-7751
/ div DC
µs / div
M2 IF1
0.5V / div DC
50µs / div
M11 YF-SUB
1V / div DC
10µs / div
N1 CL-R
0.2V / div DC
0.2ms / div
N10 RIGHT-OUT
1V / div DC
0.2ms / div
N19 surround_RIGHT
0.5V / div DC
0.2ms / div
N28 FRONT LEFT
0.2V / div DC
0.2ms / div
= 0V

Surround transmitter (R)



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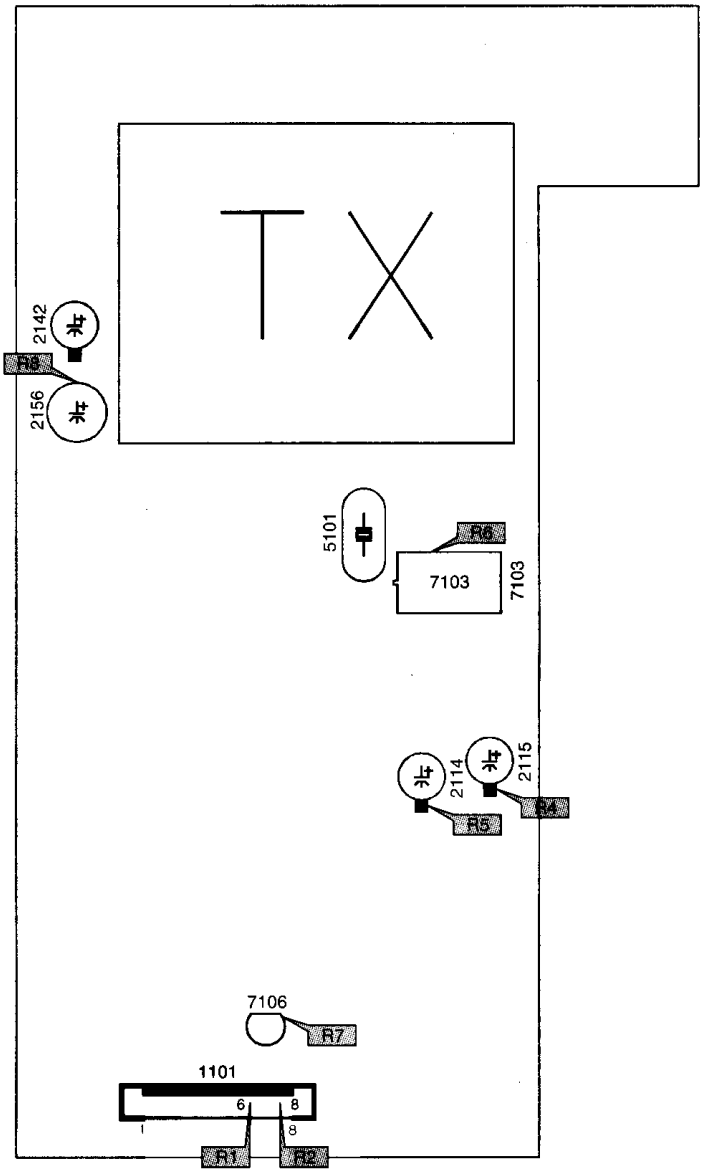
Surround transmitter (R)



(COMPONENT-SIDE)

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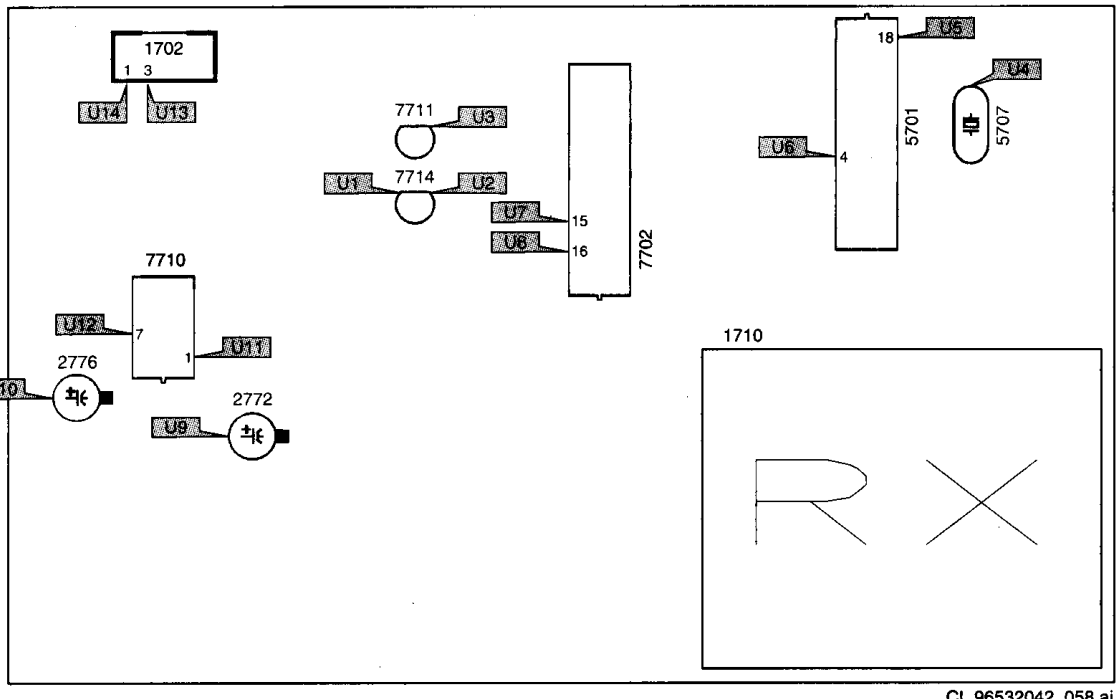
Surround receiver (U)



(COMPONENT-SIDE)

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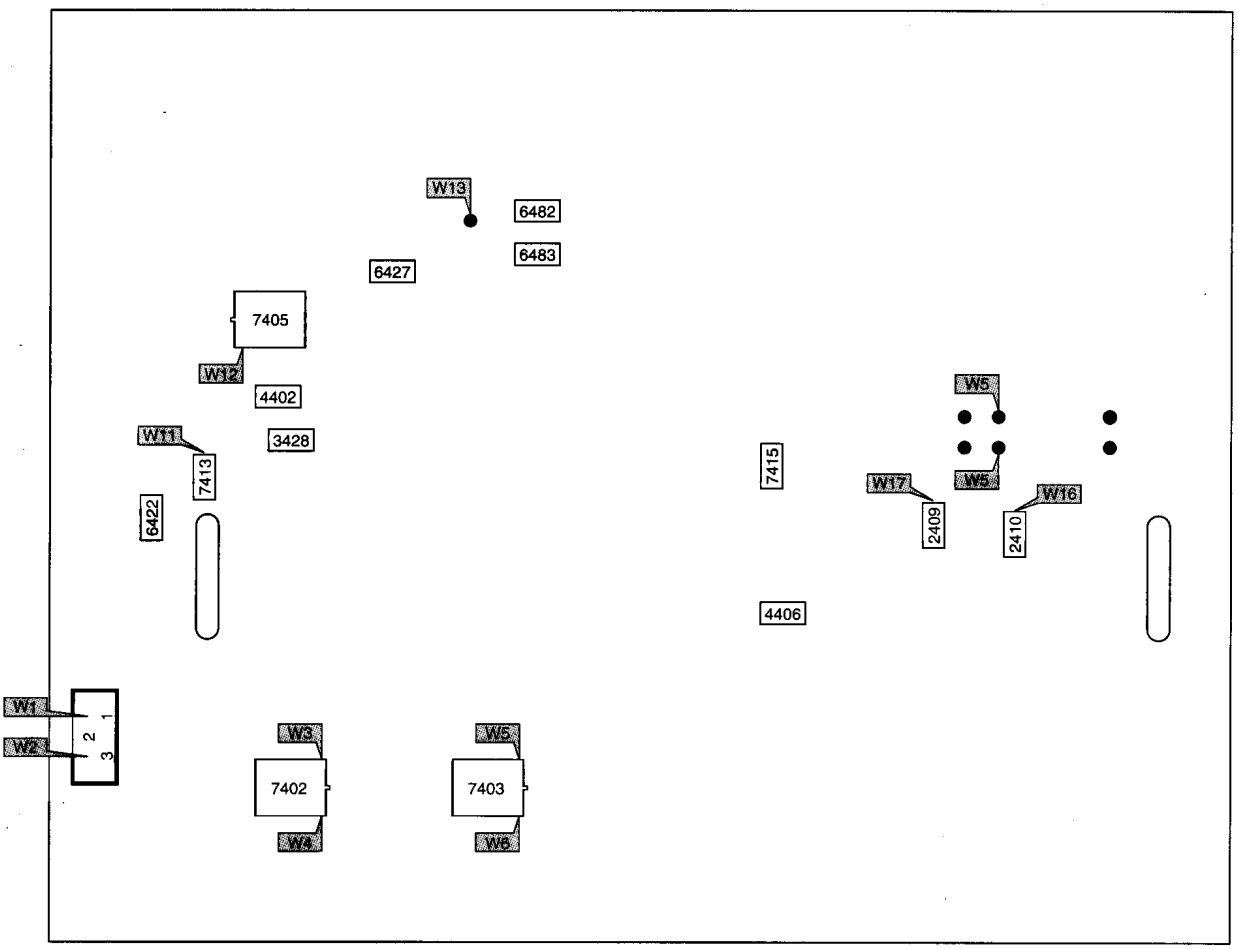
Active surround box amplifier (W1)



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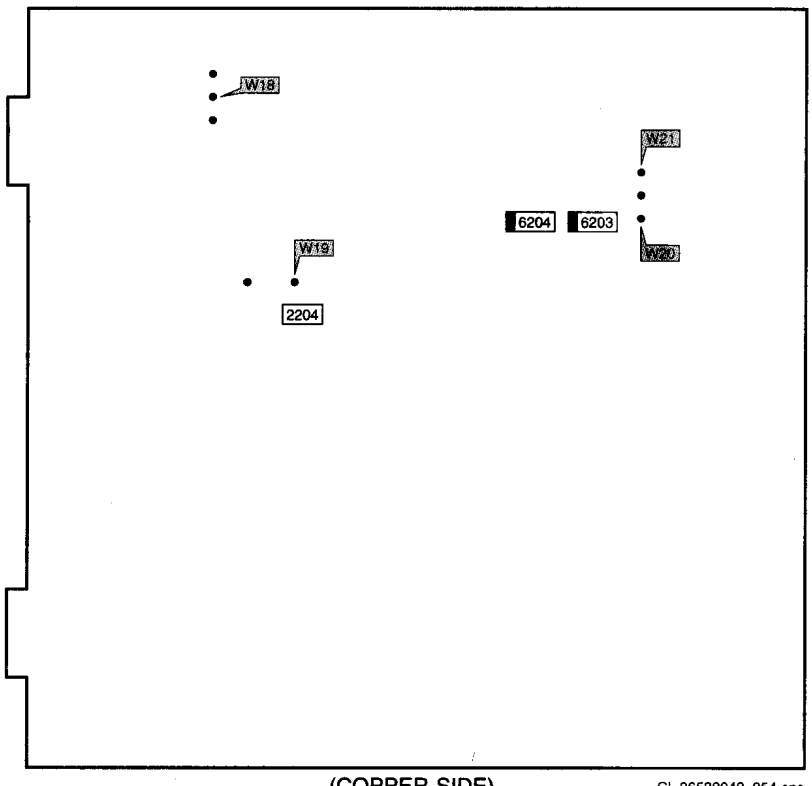
Active surround box supply (W2)



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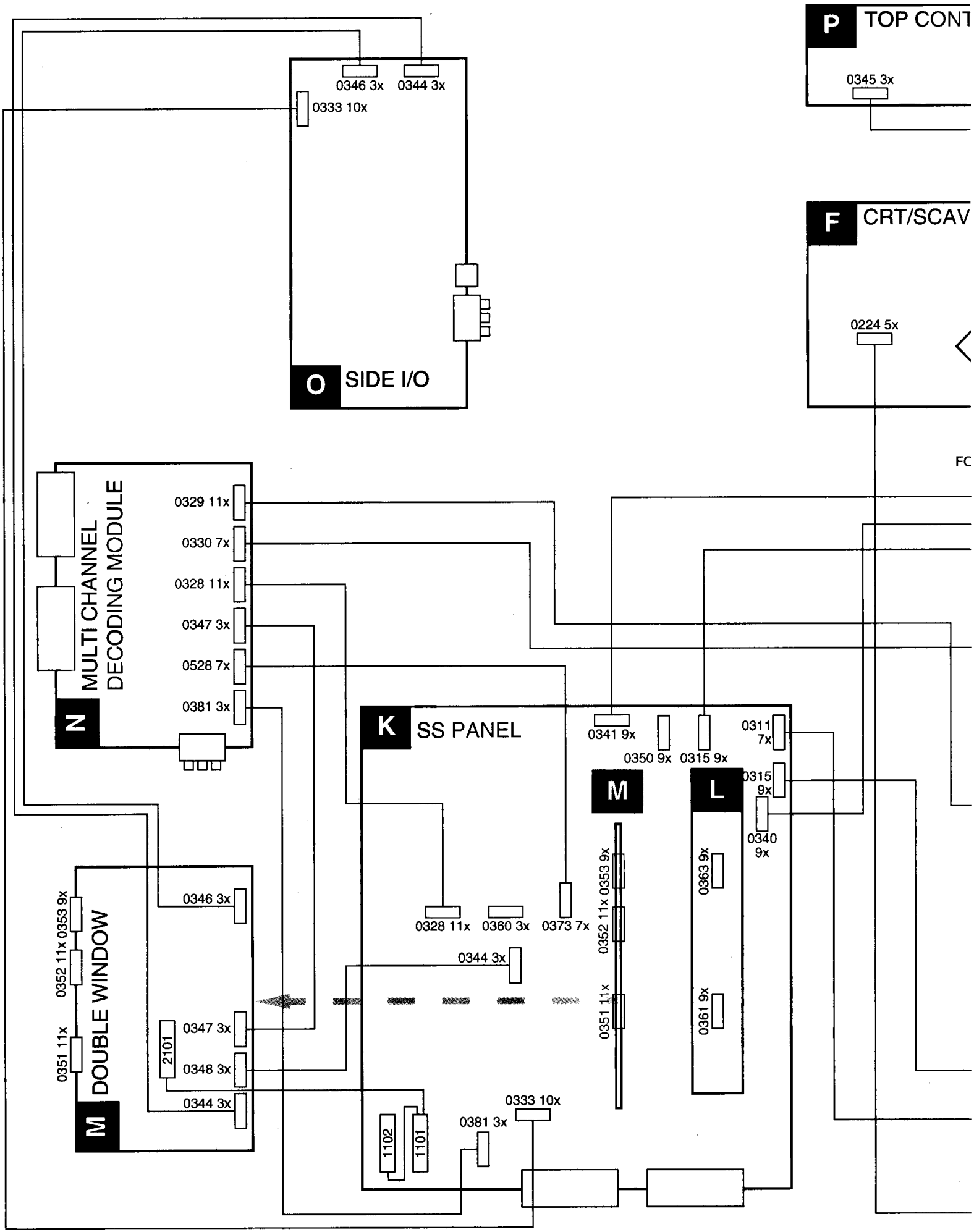
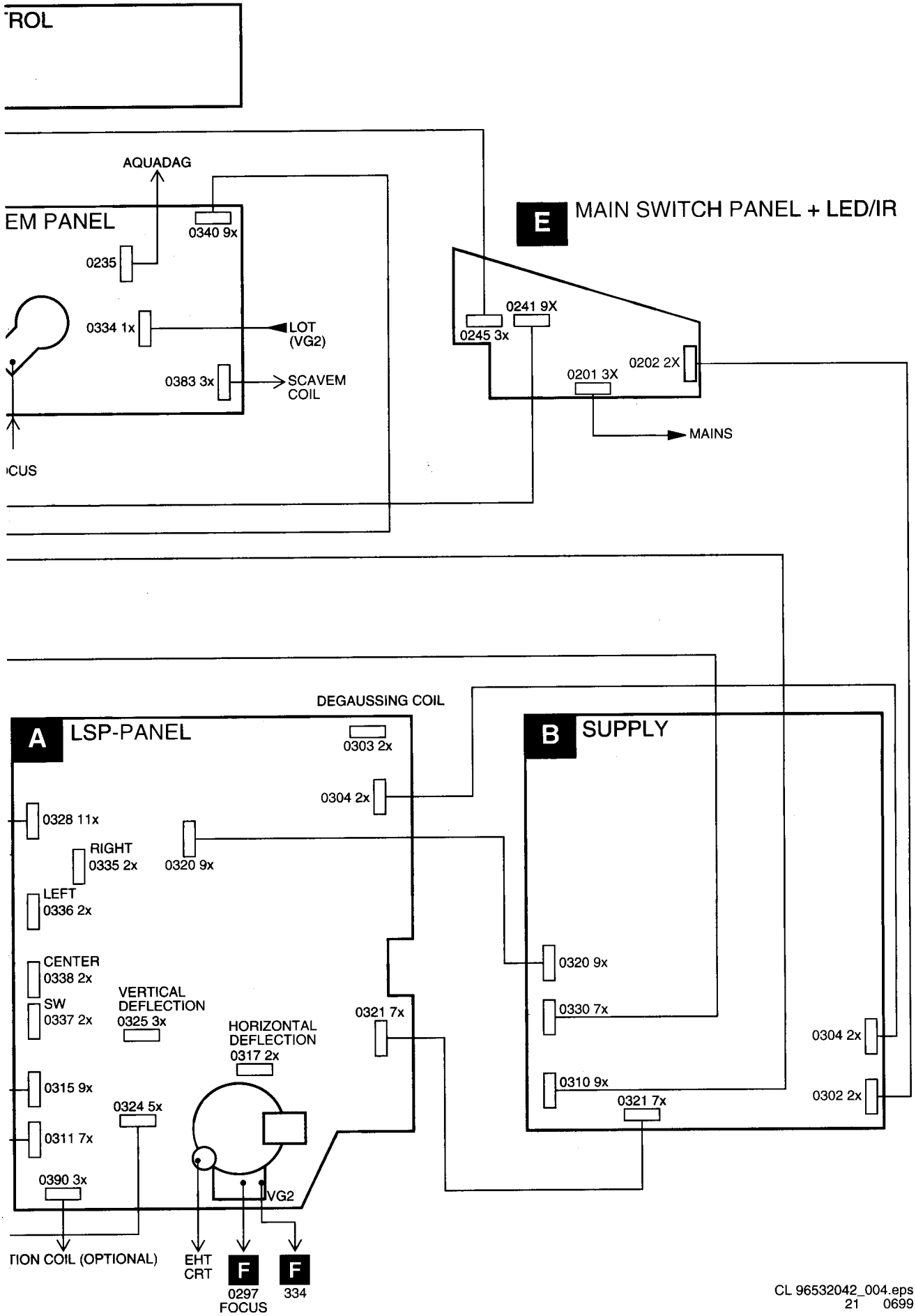
Wiring diagram





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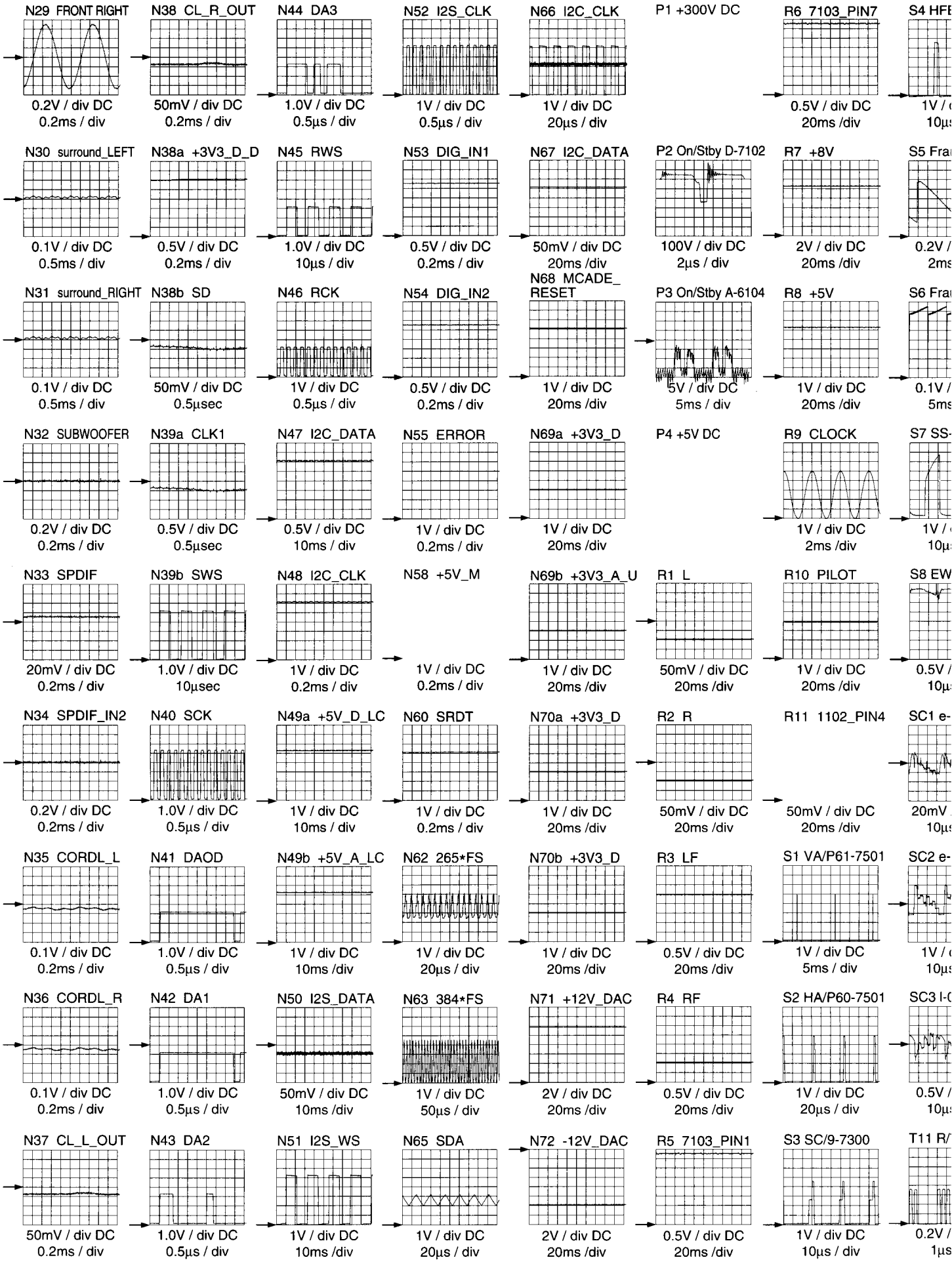
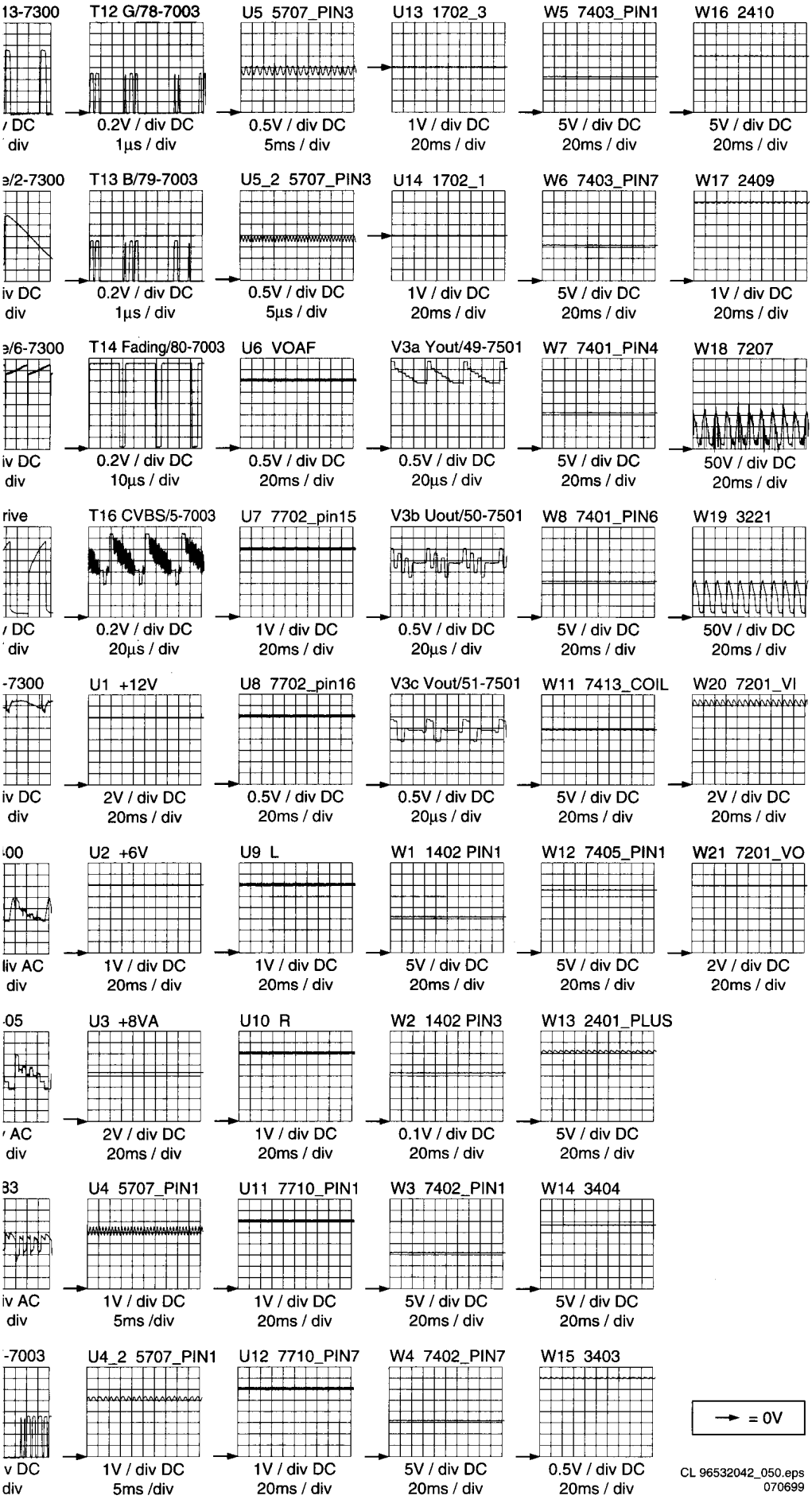
Waveforms


N29 FRONT RIGHT
0.2V / div DC
0.2ms / div
N38 CL_R_OUT
50mV / div DC
0.2ms / div
N44 DA3
1.0V / div DC
0.5µs / div
N52 I2S_CLK
1V / div DC
0.5µs / div
N66 I2C_CLK
1V / div DC
20µs / div
P1 +300V DC
R6 7103_PIN7
0.5V / div DC
20ms /div
S4 HFE
1V /
10µs
N30 surround_LEFT
0.1V / div DC
0.5ms / div
N38a +3V3_D_D
0.5V / div DC
0.2ms / div
N45 RWS
1.0V / div DC
10µs / div
N53 DIG_IN1
0.5V / div DC
0.2ms / div
N67 I2C_DATA
50mV / div DC
20ms /div
P2 On/Stby D-7102
100V / div DC
2µs / div
R7 +8V
2V / div DC
20ms /div
S5 Fra
0.2V /
2ms
N31 surround_RIGHT
0.1V / div DC
0.5ms / div
N38b SD
50mV / div DC
0.5µsec
N46 RCK
1V / div DC
0.5µs / div
N54 DIG_IN2
0.5V / div DC
0.2ms / div
N68 MCADE_ RESET
1V / div DC
20ms /div
P3 On/Stby A-6104
5V / div DC
5ms / div
R8 +5V
1V / div DC
20ms /div
S6 Fra
0.1V /
5ms
N32 SUBWOOFER
0.2V / div DC
0.2ms / div
N39a CLK1
0.5V / div DC
0.5µsec
N47 I2C_DATA
0.5V / div DC
10ms / div
N55 ERROR
1V / div DC
0.2ms / div
N69a +3V3_D
1V / div DC
20ms /div
P4 +5V DC
R9 CLOCK
1V / div DC
2ms /div
S7 SS-
1V /
10µs
N33 SPDIF
20mV / div DC
0.2ms / div
N39b SWS
1.0V / div DC
10µsec
N48 I2C_CLK
1V / div DC
0.2ms / div
N58 +5V_M
1V / div DC
0.2ms / div
N69b +3V3_A_U
1V / div DC
20ms /div
R1 L
50mV / div DC
20ms /div
R10 PILOT
1V / div DC
20ms /div
S8 EW
0.5V /
10µs
N34 SPDIF_IN2
0.2V / div DC
0.2ms / div
N40 SCK
1.0V / div DC
0.5µs / div
N49a +5V_D_LC
1V / div DC
10ms / div
N60 SRDT
1V / div DC
0.2ms / div
N70a +3V3_D
1V / div DC
20ms /div
R2 R
50mV / div DC
20ms /div
R11 1102_PIN4
50mV / div DC
20ms /div
SC1 e-
20mV
10µs
N35 CORDL_L
0.1V / div DC
0.2ms / div
N41 DAOD
1.0V / div DC
0.5µs / div
N49b +5V_A_LC
1V / div DC
10ms /div
N62 265*FS
1V / div DC
20µs / div
N70b +3V3_D
1V / div DC
20ms /div
R3 LF
0.5V / div DC
20ms /div
S1 VA/P61-7501
1V / div DC
5ms / div
SC2 e-
1V /
10µs
N36 CORDL_R
0.1V / div DC
0.2ms / div
N42 DA1
1.0V / div DC
0.5µs / div
N50 I2S_DATA
50mV / div DC
10ms /div
N63 384*FS
1V / div DC
50µs / div
N71 +12V_DAC
2V / div DC
20ms /div
R4 RF
0.5V / div DC
20ms /div
S2 HA/P60-7501
1V / div DC
20µs / div
SC3 I-C
0.5V /
10µs
N37 CL_L_OUT
50mV / div DC
0.2ms / div
N43 DA2
1.0V / div DC
0.5µs / div
N51 I2S_WS
1V / div DC
10ms /div
N65 SDA
1V / div DC
20µs / div
N72 -12V_DAC
2V / div DC
20ms /div
R5 7103_PIN1
0.5V / div DC
20ms /div
S3 SC/9-7300
1V / div DC
10µs / div
T11 R/
0.2V /
1µs



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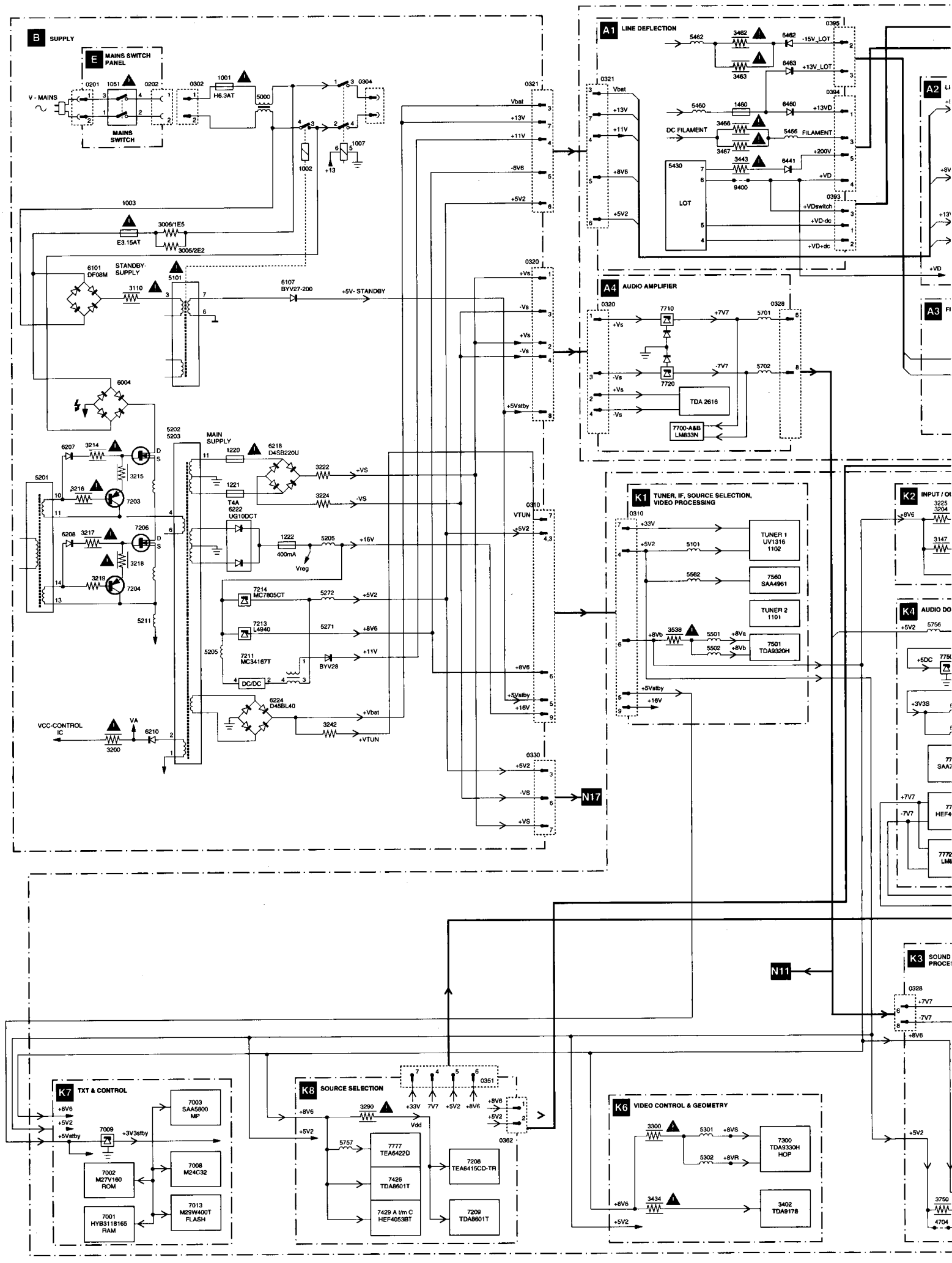
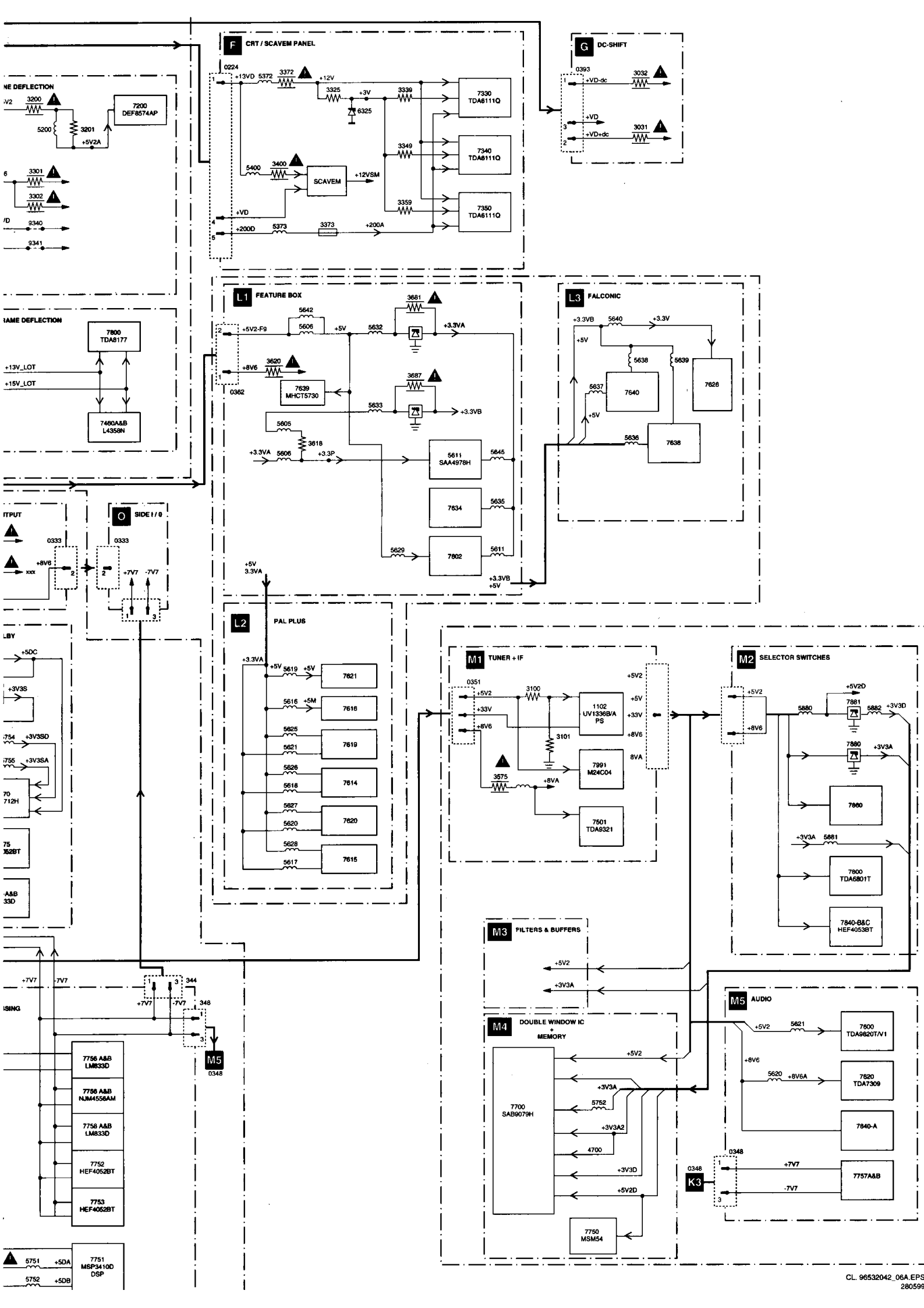
Supply lines overview




F CRT / SCAVEM PANEL
G DC-SHIFT
L1 FEATURE BOX
L2 PAL PLUS
L3 FALCONIC
O SIDE I / O
M1 TUNER + IF
M2 SELECTOR SWITCHES
M3 FILTERS & BUFFERS
M4 DOUBLE WINDOW IC + MEMORY
M5 AUDIO
K3
7200 DEF8574AP
7330 TDA6111Q
7340 TDA6111Q
7350 TDA6111Q
SCAVEM
7800 TDA8177
7460A&B L4356N
7639 MHCT5730
5611 SAA4978H
7634
7802
7621
7618
7619
7614
7620
7615
7640
7626
7638
1102 UV1336B/A PS
7991 M24C04
7501 TDA9321
7881
7880
7860
7800 TDA6801T
7840-B&C HEF4053BT
7700 SAB9079H
7750 MSM54
7600 TDA9820T/V1
7620 TDA7309
7840-A
7757A&B
7756 A&B LM833D
7756 A&B NJM4556AM
7758 A&B LM833D
7752 HEF4052BT
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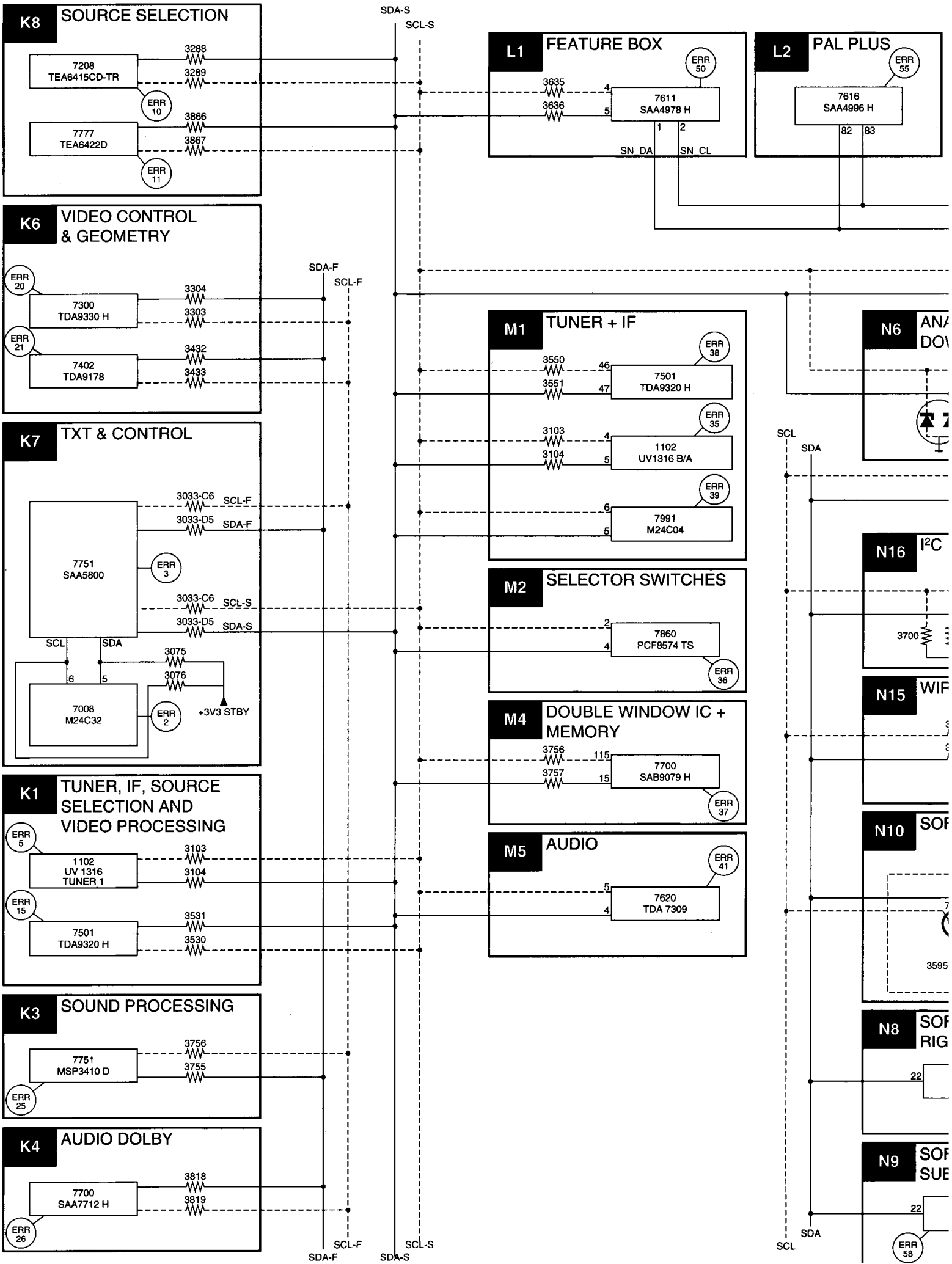
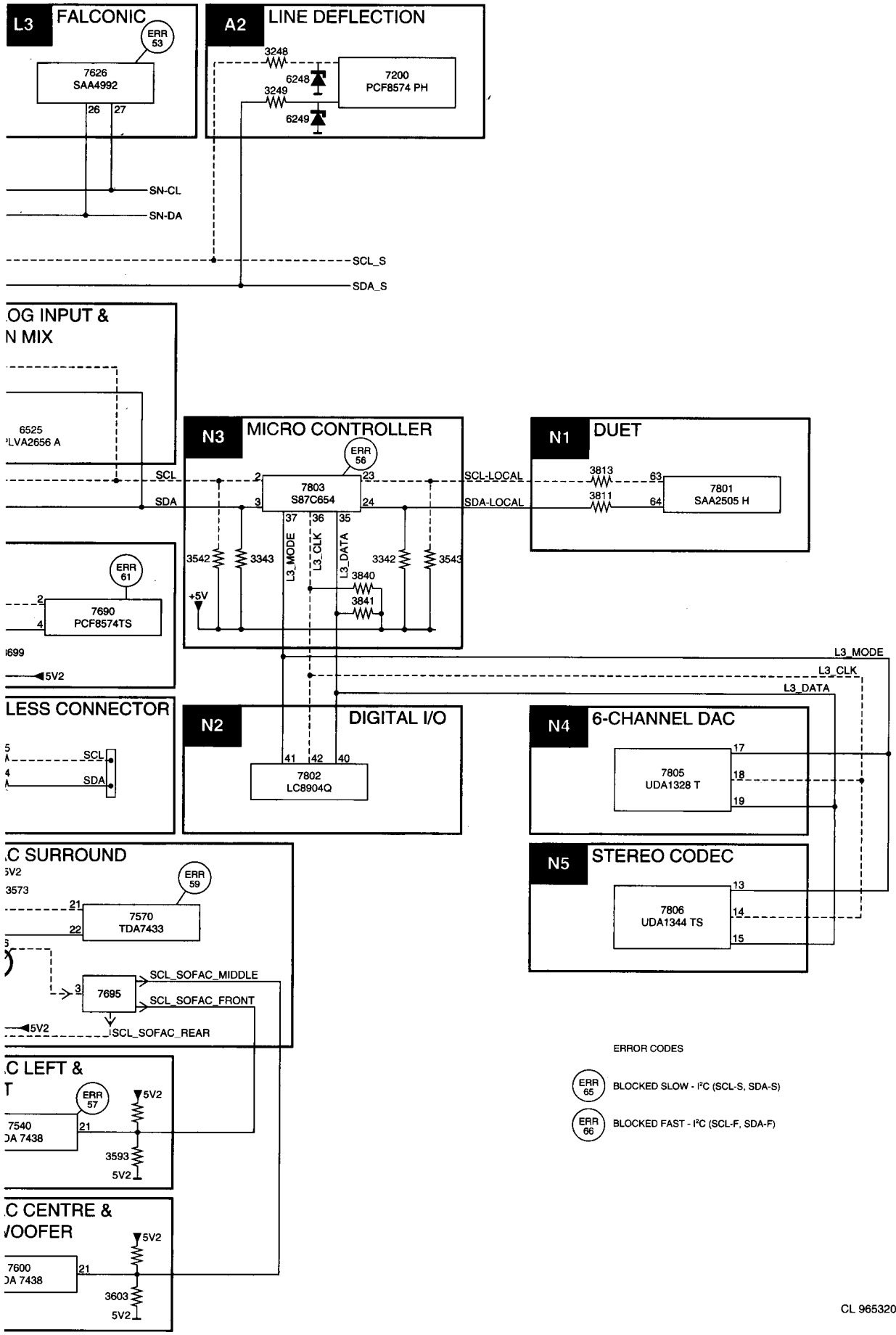
7751 MSP3410D DSP
M5
0348
CL. 96532042_06A.EPS
280599

IIC IC's overview





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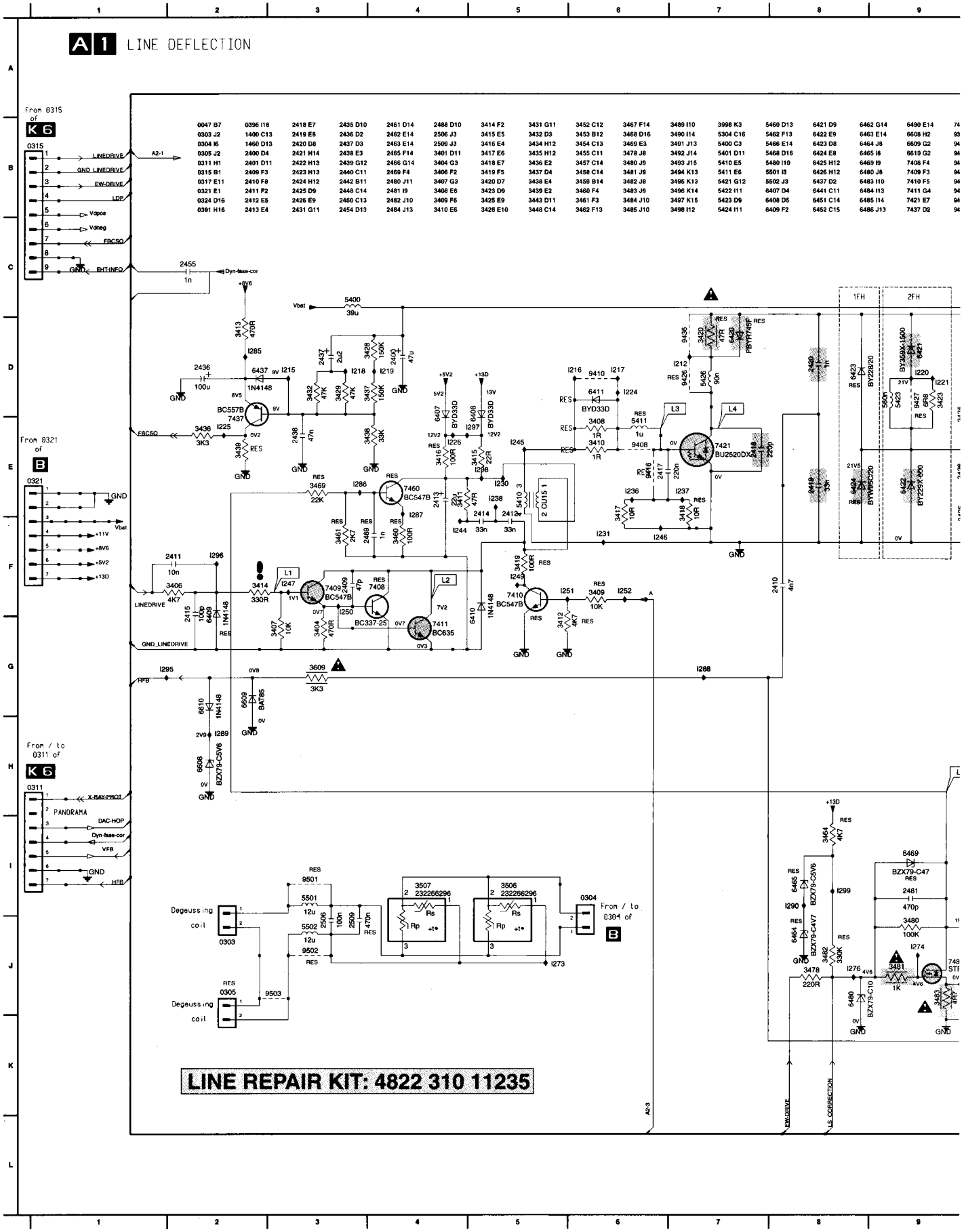
7. Circuit diagrams and PWB lay-outs

Line deflection



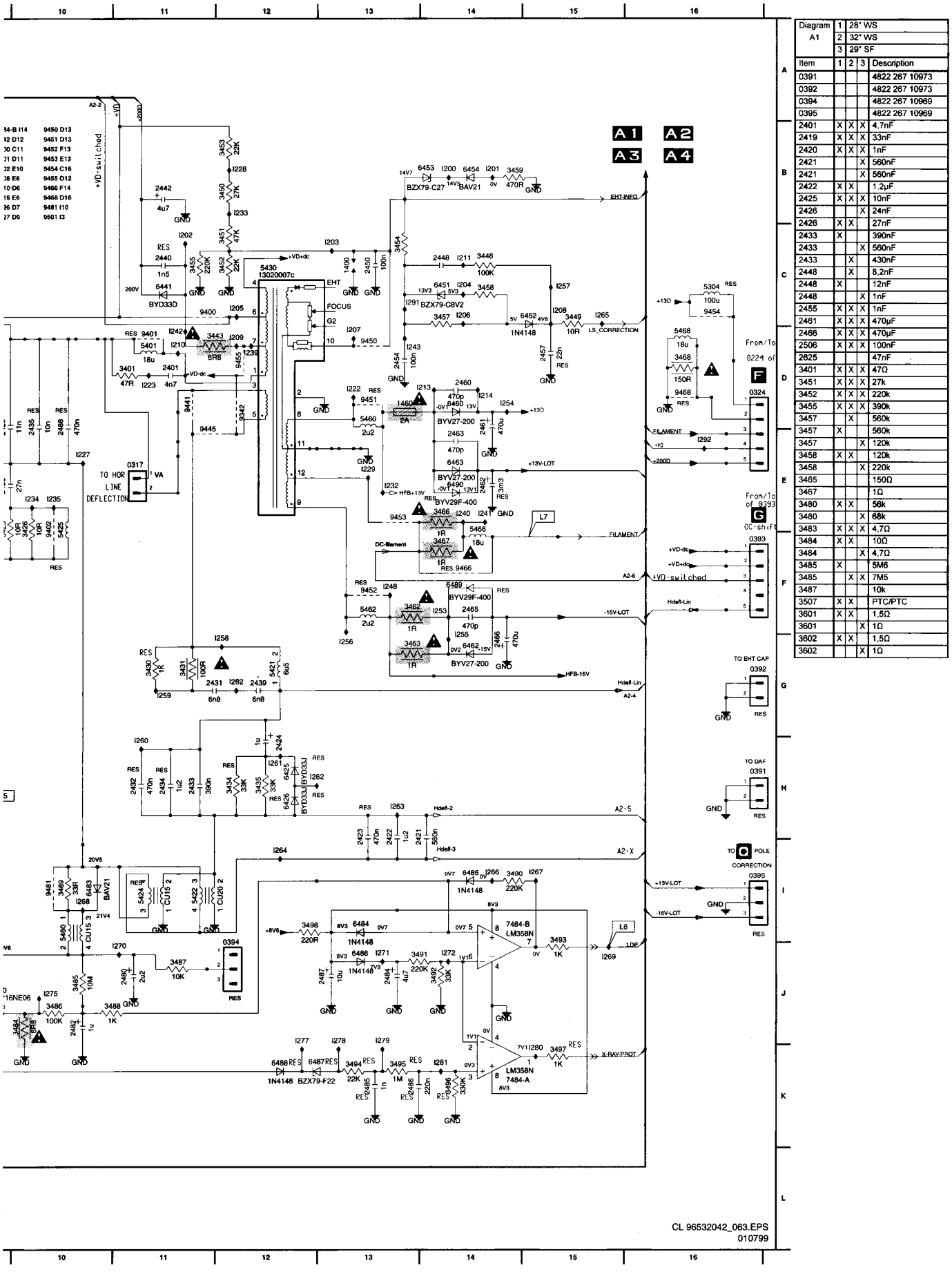
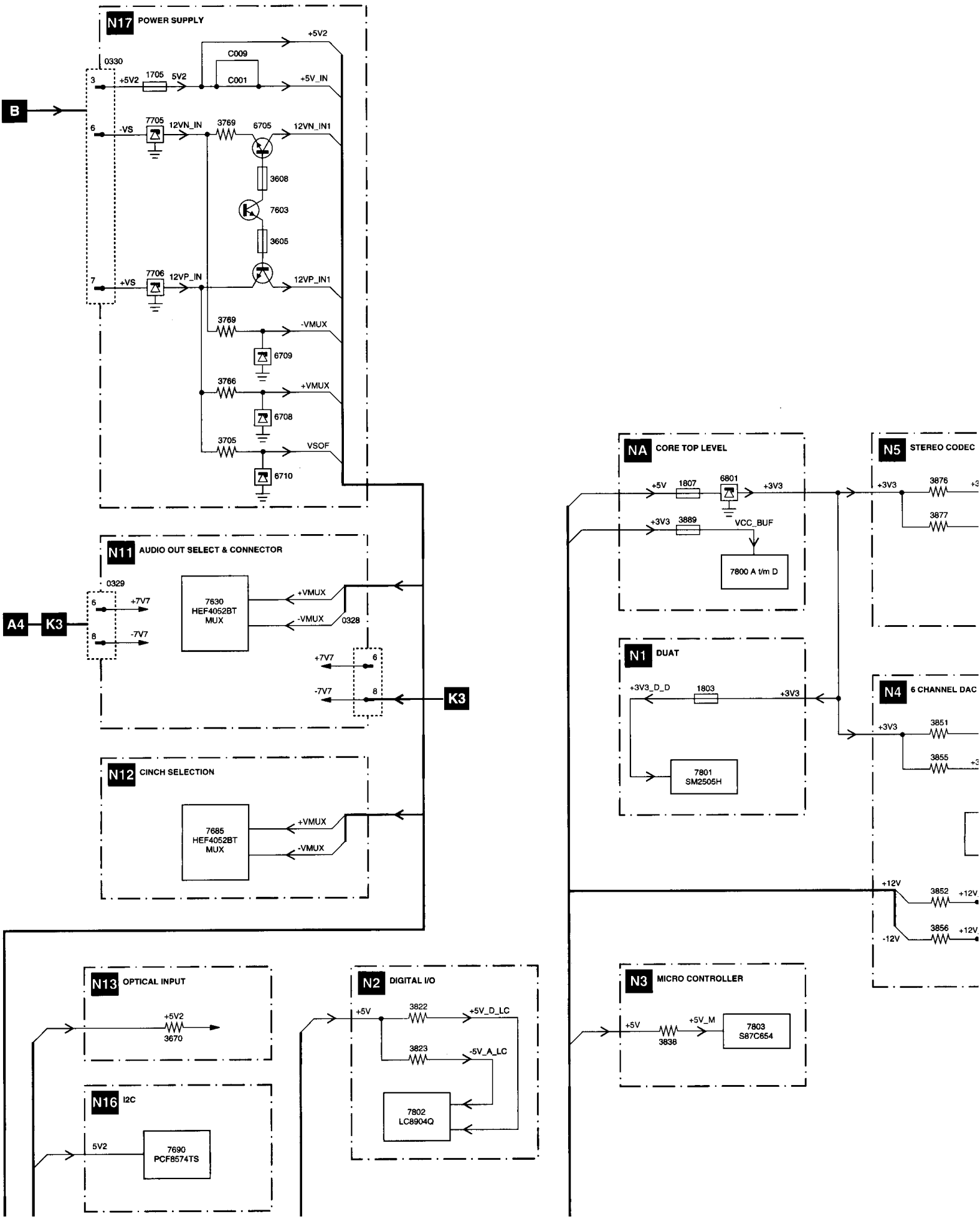
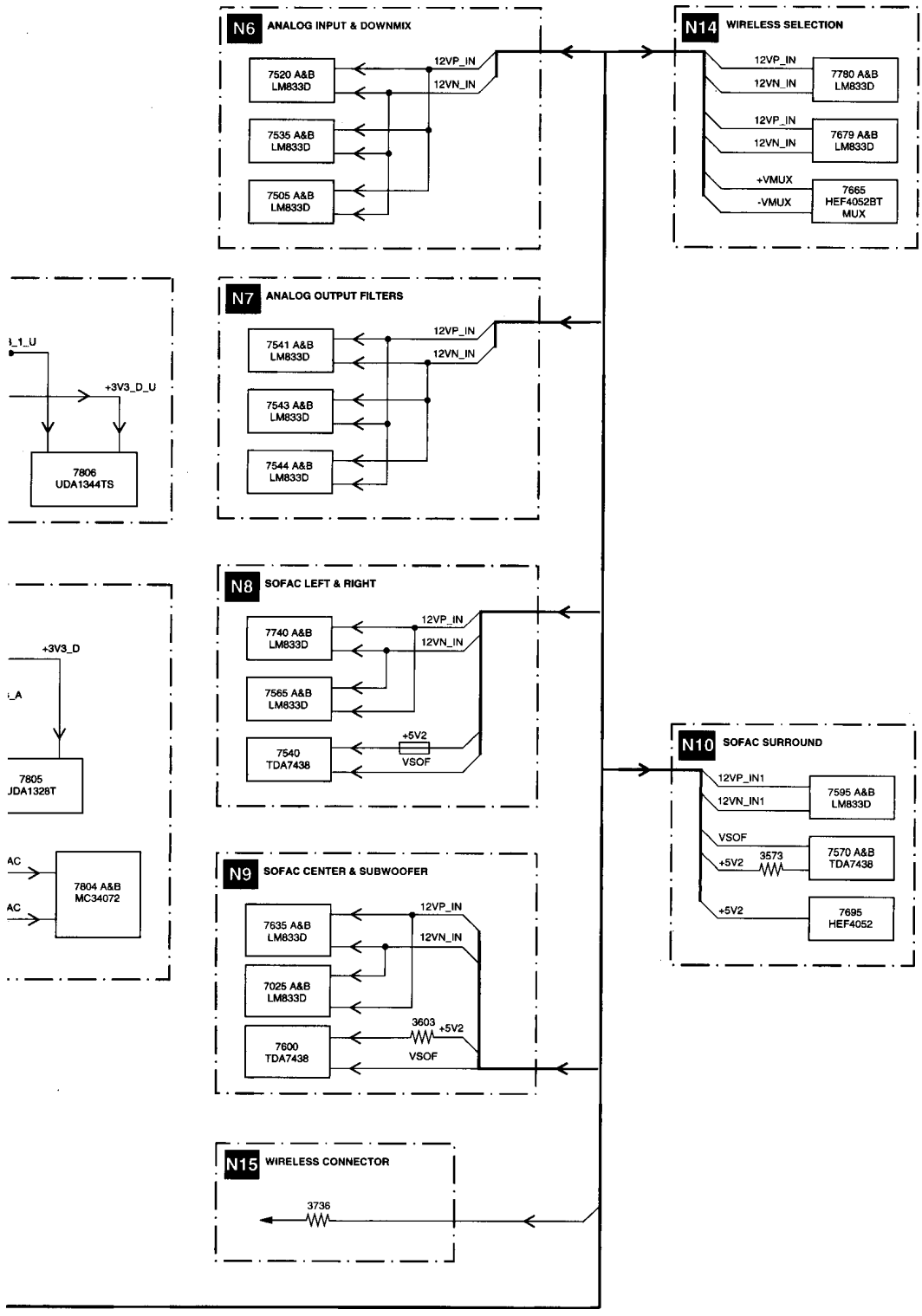


Diagram A1	1	28" WS
	2	32" WS
	3	29" SF

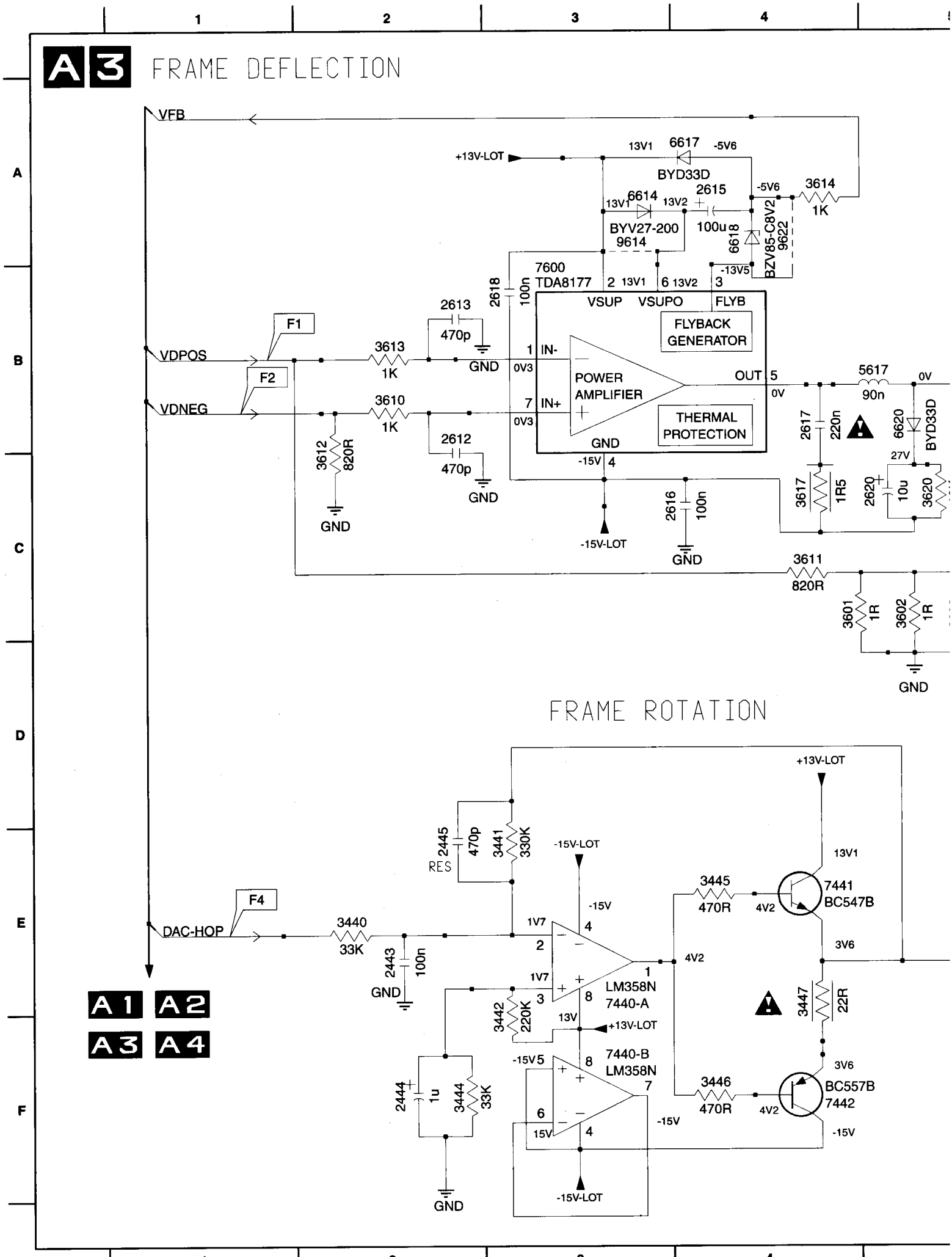
Item	1	2	3	Description
0391				4822 267 10973
0392				4822 267 10973
0394				4822 267 10969
0395				4822 267 10969
2401	X	X	X	4,7nF
2419	X	X	X	33nF
2420	X	X	X	1nF
2421			X	560nF
2421			X	560nF
2422	X	X		1,2µF
2425	X	X	X	10nF
2426			X	24nF
2426	X	X		27nF
2433	X			390nF
2433			X	560nF
2433		X		430nF
2448		X		8,2nF
2448	X			12nF
2448			X	1nF
2455	X	X	X	1nF
2461	X	X	X	470µF
2466	X	X	X	470µF
2506	X	X	X	100nF
2625				47nF
3401	X	X	X	47Ω
3451	X	X	X	27k
3452	X	X	X	220k
3455	X	X	X	390k
3457		X		560k
3457	X			560k
3457			X	120k
3458	X	X		120k
3458			X	220k
3465				150Ω
3467				1Ω
3480	X	X		56k
3480			X	68k
3483	X	X	X	4,7Ω
3484	X	X		10Ω
3484			X	4,7Ω
3485	X			5M6
3485		X	X	7M5
3487				10k
3507	X	X		PTC/PTC
3601	X	X		1,5Ω
3601			X	1Ω
3602	X	X		1,5Ω
3602			X	1Ω

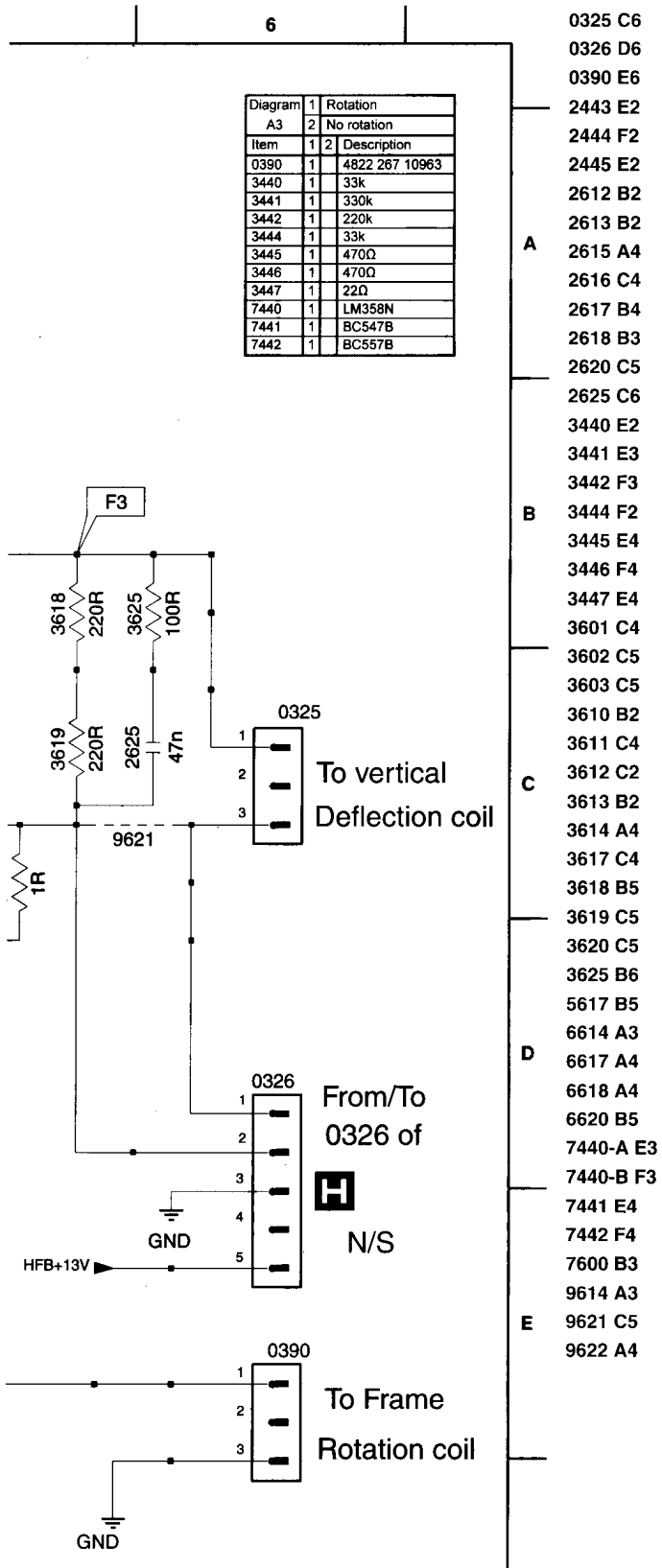
Supply lines overview (cont.)




N6
ANALOG INPUT & DOWNMIX
7520 A&B
LM833D
7535 A&B
LM833D
7505 A&B
LM833D
12VP_IN
12VN_IN
N14
WIRELESS SELECTION
12VP_IN
12VN_IN
7780 A&B
LM833D
12VP_IN
12VN_IN
7679 A&B
LM833D
+VMUX
-VMUX
7665
HEF4052BT
MUX
N7
ANALOG OUTPUT FILTERS
7541 A&B
LM833D
7543 A&B
LM833D
7544 A&B
LM833D
12VP_IN
12VN_IN
+3V3_D_U
7806
UDA1344TS
N8
SOFAC LEFT & RIGHT
7740 A&B
LM833D
7565 A&B
LM833D
7540
TDA7438
12VP_IN
12VN_IN
+5V2
VSOF
+3V3_D
7805
JDA1328T
7804 A&B
MC34072
N10
SOFAC SURROUND
12VP_IN1
12VN_IN1
7595 A&B
LM833D
VSOF
+5V2
3573
7570 A&B
TDA7438
+5V2
7695
HEF4052
N9
SOFAC CENTER & SUBWOOFER
7635 A&B
LM833D
7025 A&B
LM833D
7600
TDA7438
12VP_IN
12VN_IN
3603
+5V2
VSOF
N15
WIRELESS CONNECTOR
3736

Frame deflection

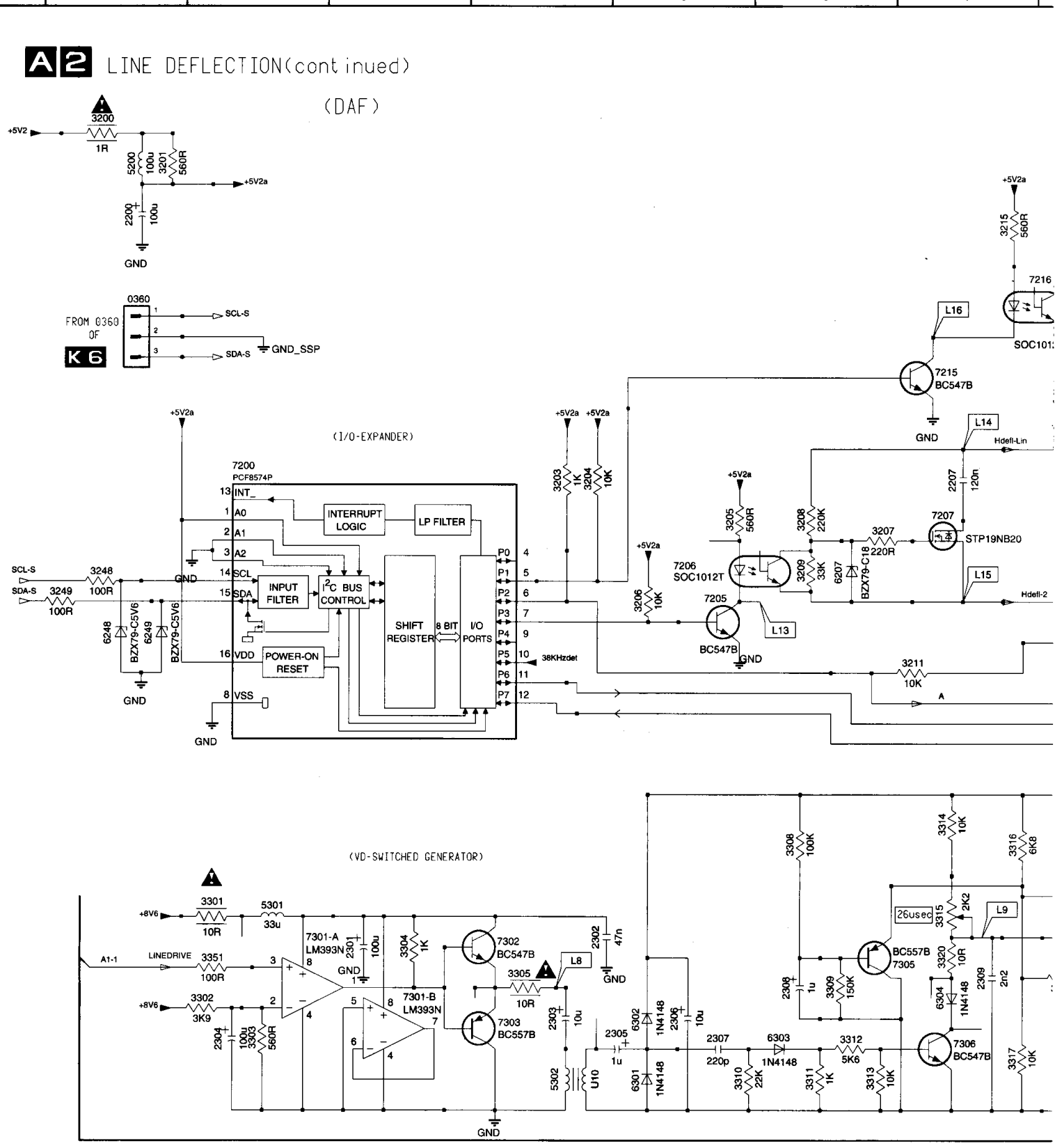




0325 C6
0326 D6
0390 E6
2443 E2
2444 F2
2445 E2
2612 B2
2613 B2
2615 A4
2616 C4
2617 B4
2618 B3
2620 C5
2625 C6
3440 E2
3441 E3
3442 F3
3444 F2
3445 E4
3446 F4
3447 E4
3601 C4
3602 C5
3603 C5
3610 B2
3611 C4
3612 C2
3613 B2
3614 A4
3617 C4
3618 B5
3619 C5
3620 C5
3625 B6
5617 B5
6614 A3
6617 A4
6618 A4
6620 B5
7440-A E3
7440-B F3
7441 E4
7442 F4
7600 B3
9614 A3
9621 C5
9622 A4

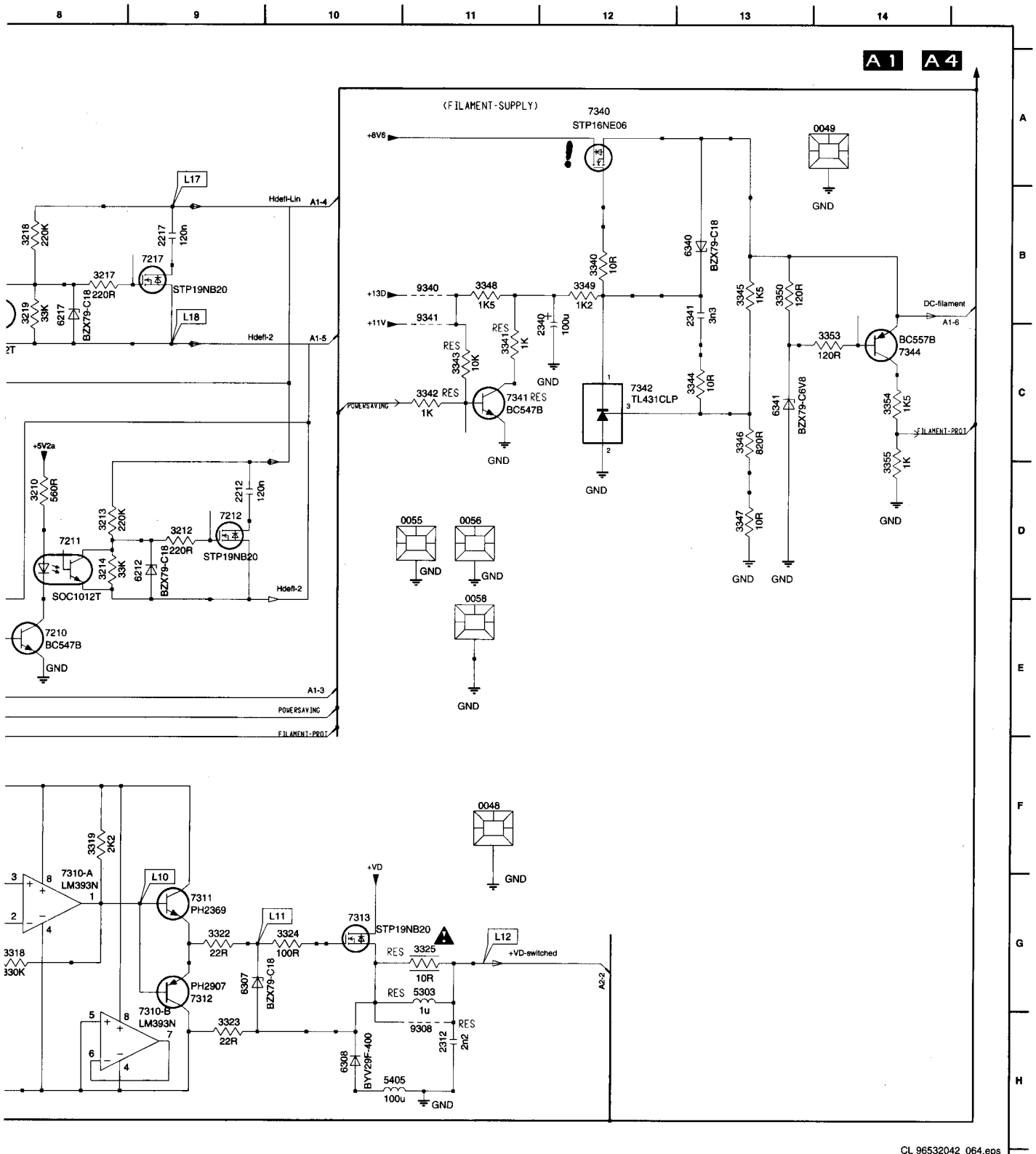
Line deflection (continued)

0049 A14	2217 B9	2308 G6	3204 D4	3212 D9	3249 D1	3310 H5	3318 G8	3341 C11	3349 B12	5302 H4	6301 H5	7200 D2	7216 B7	7
0055 D11	2301 G3	2309 G7	3205 D5	3213 D8	3301 G2	3311 H6	3319 F8	3342 C11	3350 B13	5303 G11	6302 G5	7205 E5	7217 B9	7
0056 D11	2302 G4	2312 H11	3206 E5	3214 D8	3302 G2	3312 H6	3320 G7	3343 C11	3351 G2	5405 H10	6303 H6	7206 D5	7301-A G2	7
0058 E11	2303 G4	2340 C12	3207 D6	3215 B7	3303 H2	3313 H6	3322 G9	3344 C13	3353 C14	6207 D6	6304 G7	7207 D7	7301-B G3	7
0360 B1	2304 H2	2341 B13	3208 D6	3217 B8	3304 G3	3314 F7	3323 H9	3345 B13	3354 C14	6212 D9	6307 G9	7210 E8	7302 G4	7
2200 B1	2305 H5	3200 A1	3209 D6	3218 B8	3305 G4	3315 G7	3324 G10	3346 C13	3355 D14	6217 B8	6308 H10	7211 D8	7303 G4	7
2207 D7	2306 G5	3201 A1	3210 D8	3219 B8	3308 F6	3316 F7	3325 G11	3347 D13	5200 A1	6248 E1	6340 B13	7212 D9	7305 G6	7

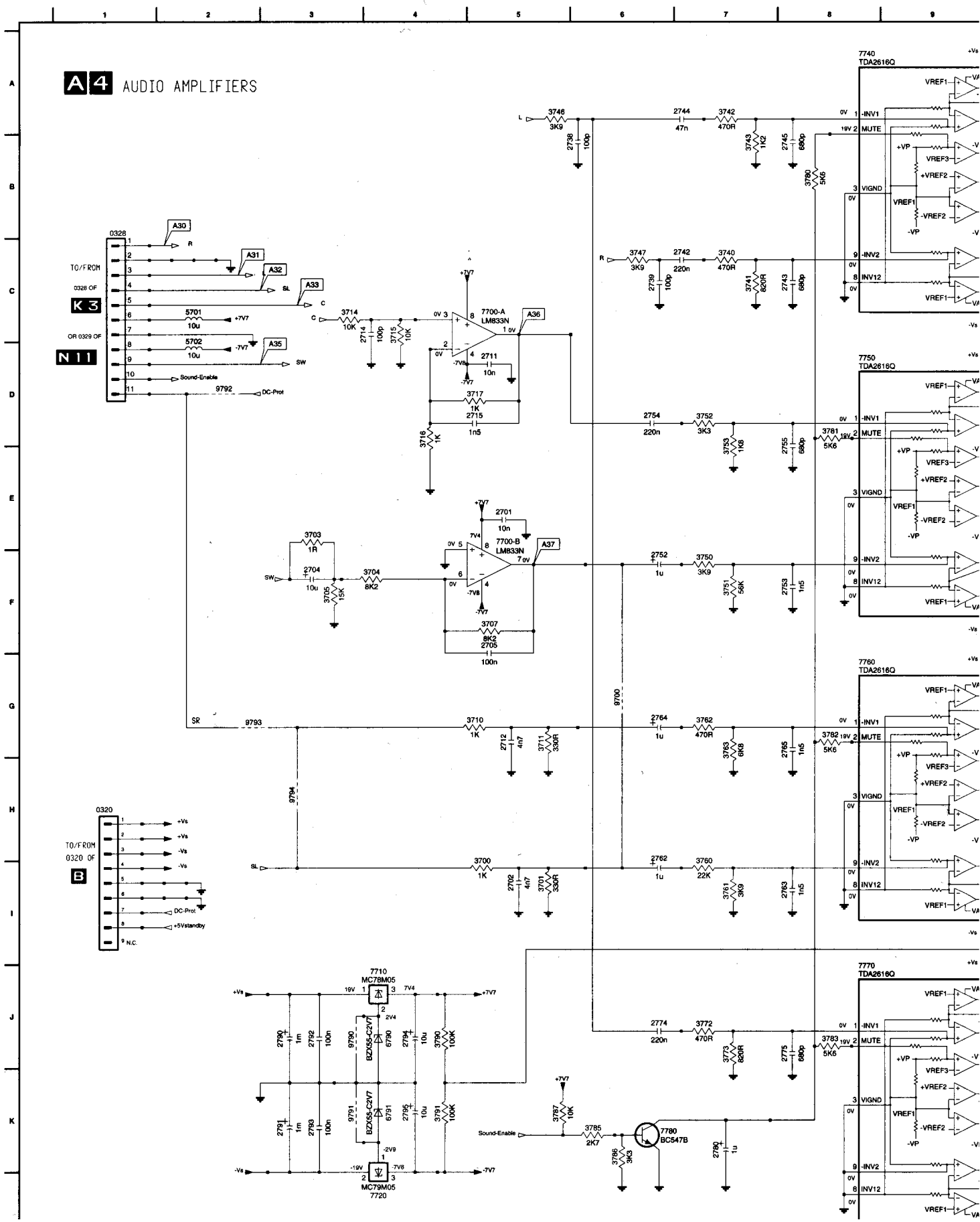


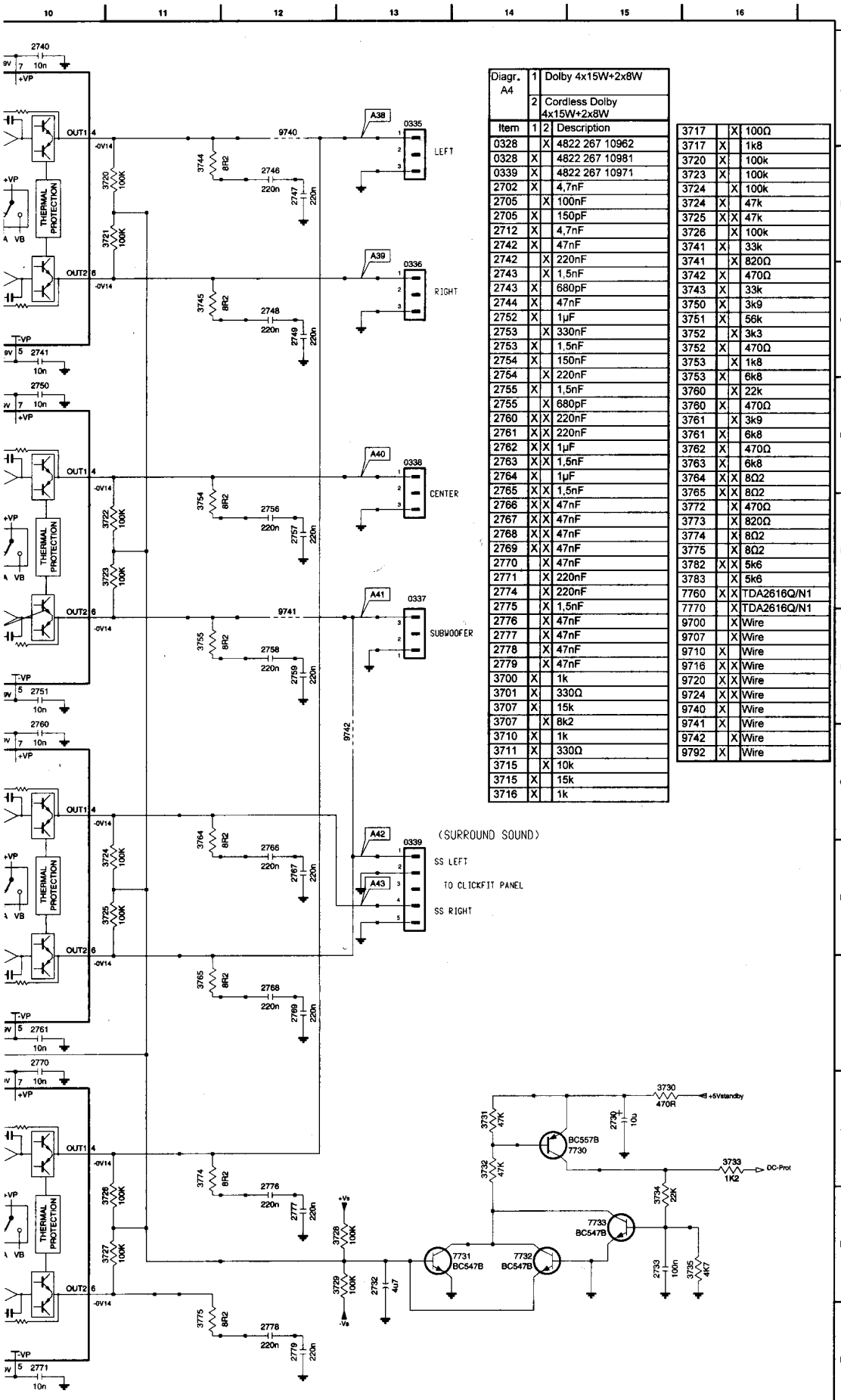
310-A G8
310-B H9
311 G9
312 G9
313 G10
340 A12
341 C11

7344 C14
9308 H11
9340 B11
9341 B11



Audio amplifiers





Diagr. A4	1	Dolby 4x15W+2x8W
	2	Cordless Dolby 4x15W+2x8W

Item	1	2	Description
0328		X	4822 267 10962
0328	X		4822 267 10981
0339	X		4822 267 10971
2702	X		4,7nF
2705		X	100nF
2705	X		150pF
2712	X		4,7nF
2742	X		47nF
2742		X	220nF
2743		X	1,5nF
2743	X		680pF
2744	X		47nF
2752	X		1µF
2753		X	330nF
2753	X		1,5nF
2754	X		150nF
2754		X	220nF
2755	X		1,5nF
2755		X	680pF
2760	X	X	220nF
2761	X	X	220nF
2762	X	X	1µF
2763	X	X	1,5nF
2764	X		1µF
2765	X	X	1,5nF
2766	X	X	47nF
2767	X	X	47nF
2768	X	X	47nF
2769	X	X	47nF
2770		X	47nF
2771		X	220nF
2774		X	220nF
2775		X	1,5nF
2776		X	47nF
2777		X	47nF
2778		X	47nF
2779		X	47nF
3700	X		1k
3701	X		330Ω
3707	X		15k
3707		X	8k2
3710	X		1k
3711	X		330Ω
3715		X	10k
3715	X		15k
3716	X		1k

3717		X	100Ω
3717	X		1k8
3720	X		100k
3723	X		100k
3724		X	100k
3724	X		47k
3725	X	X	47k
3726		X	100k
3741	X		33k
3741		X	820Ω
3742	X		470Ω
3743	X		33k
3750	X		3k9
3751	X		56k
3752		X	3k3
3752	X		470Ω
3753		X	1k8
3753	X		6k8
3760		X	22k
3760	X		470Ω
3761		X	3k9
3761	X		6k8
3762	X		470Ω
3763	X		6k8
3764	X	X	8Ω2
3765	X	X	8Ω2
3772		X	470Ω
3773		X	820Ω
3774		X	8Ω2
3775		X	8Ω2
3782	X	X	5k6
3783		X	5k6
7760	X	X	TDA2616Q/N1
7770		X	TDA2616Q/N1
9700		X	Wire
9707		X	Wire
9710	X		Wire
9716	X	X	Wire
9720	X	X	Wire
9724	X	X	Wire
9740	X		Wire
9741	X		Wire
9742		X	Wire
9792	X		Wire

0042 D15
0043 D16
0044 D16
0320 H1
0328 B1
0335 A13
0336 C13
0337 E13
0338 D13
0339 H13
2701 E5
2702 I5
2704 F3
2705 F5
2711 D5
2712 G5
2714 C4
2715 D5
2730 J15
2732 K13
2733 K15
2738 B6
2739 C6
2740 A10
2741 C10
2742 C7
2743 C8
2744 A7
2745 B8
2746 B12
2747 B12
2748 C12
2749 C12
2750 D10
2751 F10
2752 F6
2753 F8
2754 D6
2755 D8
2756 E12
2757 E12
2758 F12
2759 F12
2760 G10
2761 I10
2762 H6
2763 I8
2764 G6
2765 G8
2766 H12
2767 H12
2768 I12
2769 I12
2770 I10
2771 L10
2774 J6
2775 J8
2776 K12
2777 K12
2778 L12
2779 L12
2780 K7
2790 J3
2791 K3
2792 J3
2793 K3
2794 J4
2795 K4
3700 I5
3701 I5
3703 E3
3704 F4
3705 F3
3707 F5
3710 G5
3711 G5
3714 C3
3715 C4
3716 D4
3717 D5
3720 B11
3721 B11
3722 E11
3723 E11
3724 H11
3725 H11
3726 K11
3727 K11
3728 K13
3729 K13
3730 J15
3731 J14
3732 J14
3733 J16
3734 K15
3735 K16
3740 C7
3741 C7
3742 A7
3743 B7
3744 B11
3745 C11
3746 A5
3747 C6
3750 F7
3751 F7
3752 D7
3753 E7
3754 E11
3755 F11
3760 I7
3761 I7
3762 G7
3763 G7
3764 G11
3765 I11
3772 J7
3773 J7
3774 J11
3775 L11
3780 B8
3781 D8
3782 G8
3783 J8
3785 K6
3786 K6
3787 K5
3790 J4
3791 K4
5701 C2
5702 D2
6790 J4
6791 K4
7700-A C5
7700-B E5
7710 J4
7720 L4
7730 J15
7731 K14
7732 K14
7733 K15
7740 A8
7750 D8
7760 G8
7770 J8
7780 K6
9700 G6
9740 A12
9741 F12
9742 G13
9790 J3
9791 K3
9792 D2
9793 G2
9794 H3

Top supply

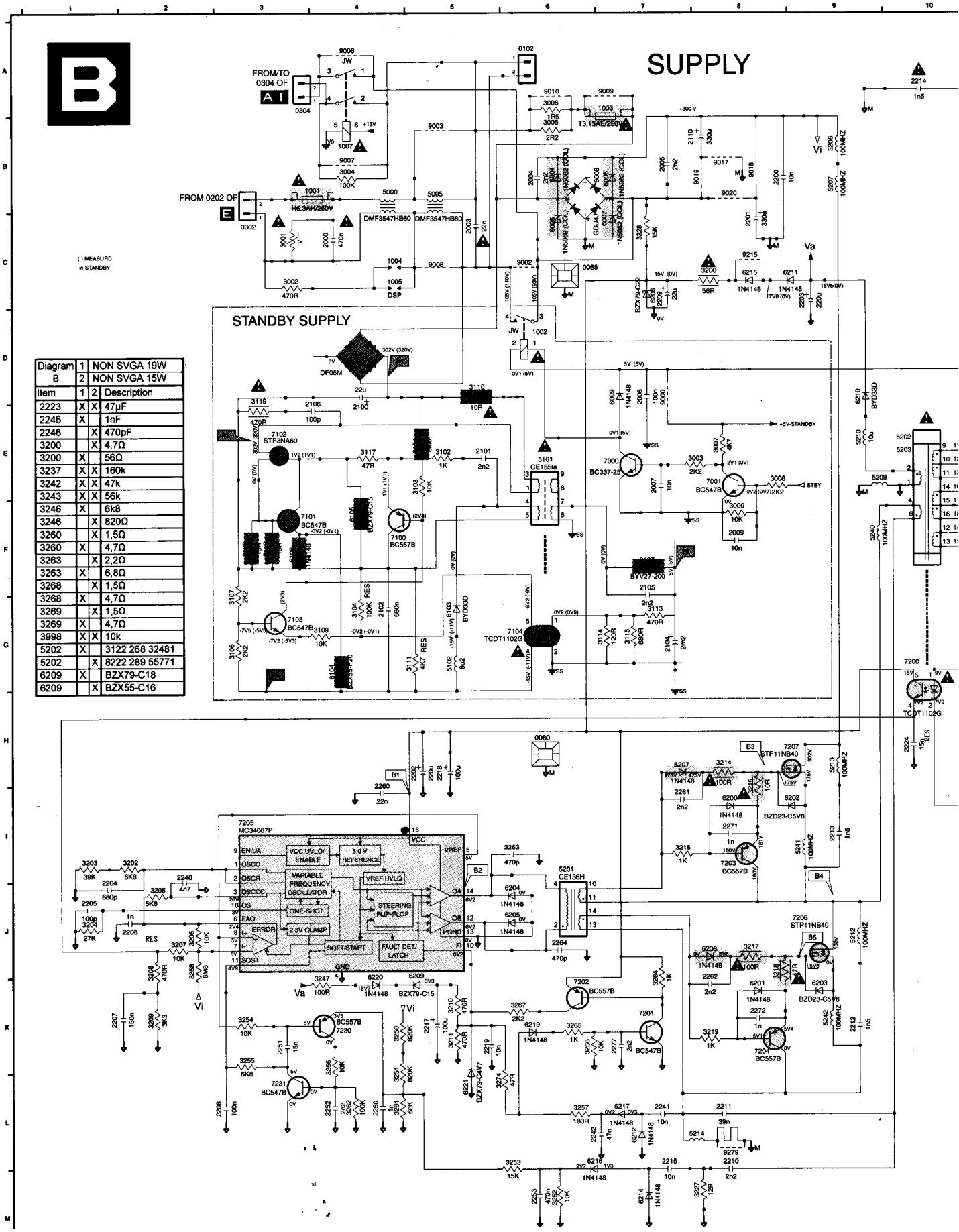
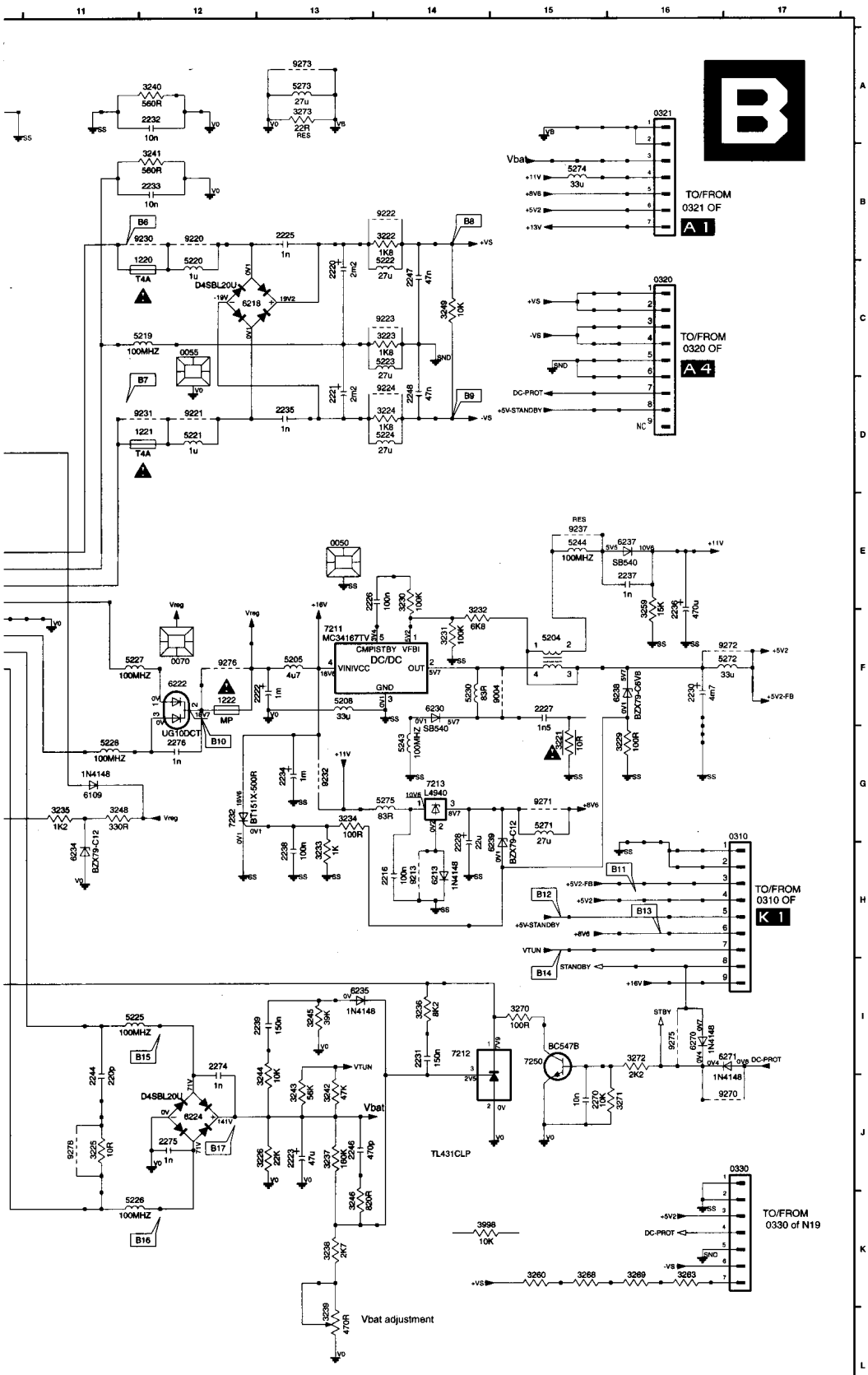


Diagram	1	NON SVGA 19W
B	2	NON SVGA 15W
Item	1	2 Description
2223	X	X 47µF
2246	X	1nF
2246		X 470pF
3200		X 4,7Ω
3200	X	56Ω
3237	X	X 160k
3242	X	X 47k
3243	X	X 56k
3246	X	6k8
3246		X 820Ω
3260		X 1,5Ω
3260	X	4,7Ω
3263		X 2,2Ω
3263	X	6,8Ω
3268		X 1,5Ω
3268	X	4,7Ω
3269		X 1,5Ω
3269	X	4,7Ω
3998	X	X 10k
5202	X	3122 268 32481
5202		X 8222 289 55771
6209	X	BZX79-C18
6209		X BZX55-C16



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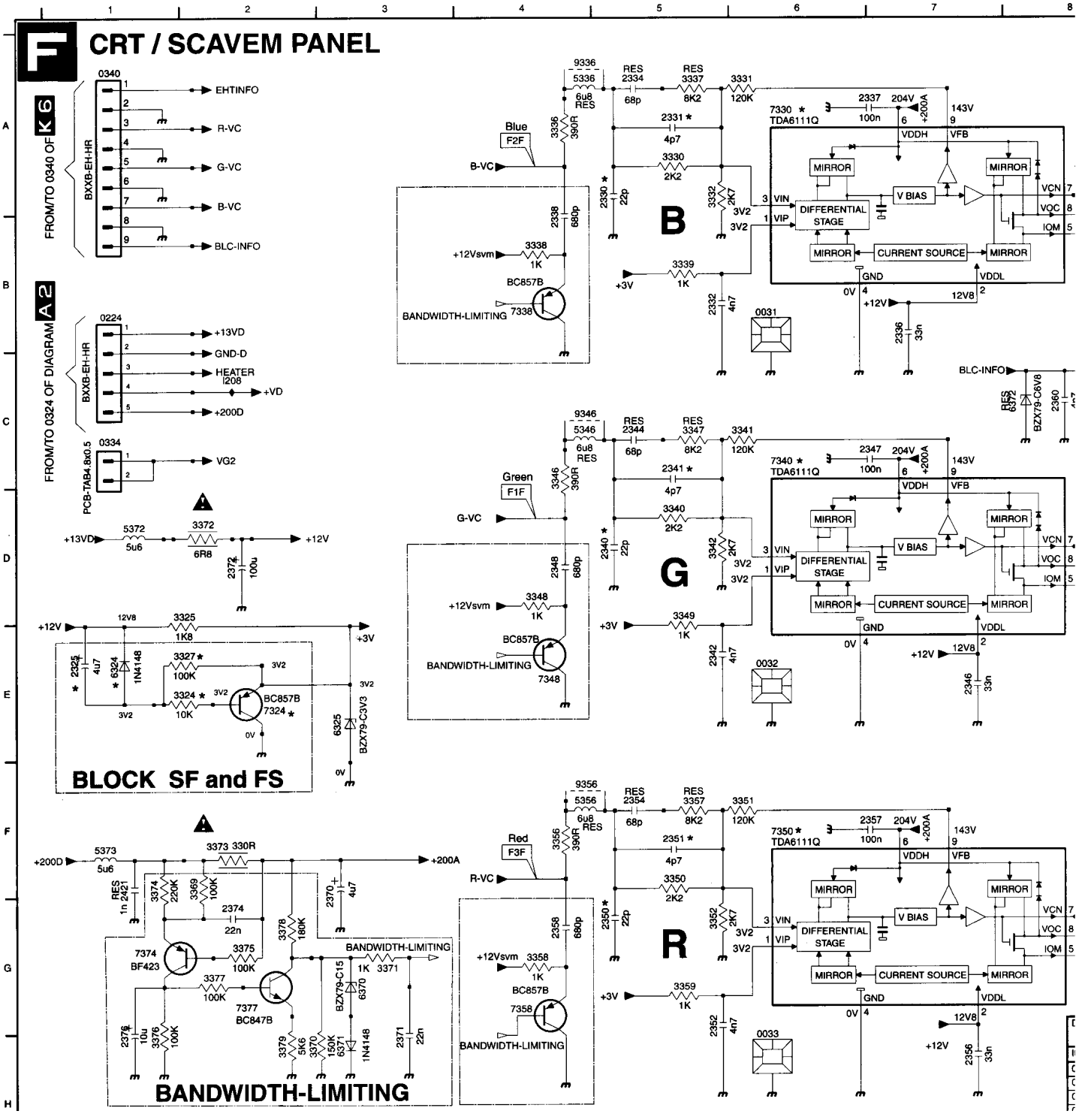
060799

5.6

	U1 K15	3206 J2	6211 C9
	U2 K16	3207 J2	6212 L7
	0050 E13	3208 J2	6213 H14
	0055 C12	3209 K2	6214 M7
	0060 H6	3210 K5	6215 C8
	0065 C6	3211 K5	6216 L6
A	0070 F12	3214 H8	6217 L7
	0102 A6	3215 I8	6218 C12
	0302 C3	3216 I7	6219 K6
	0304 A4	3217 J8	6220 K4
	0310 G17	3218 J8	6221 L5
	0320 C16	3219 K8	6222 F12
	0321 A16	3221 G15	6224 J12
	0330 J17	3222 B14	6230 F14
	0331 G8	3223 C14	6234 H11
	1001 B4	3224 D14	6235 I13
B	1002 D6	3225 J11	6237 E16
	1003 A7	3226 J13	6238 F16
	1004 C4	3227 M8	6239 H15
	1005 C4	3228 C7	6270 I16
	1007 B4	3229 G16	6271 I17
	1220 C12	3230 E14	7000 E7
	1221 D12	3231 F14	7001 E8
	1222 F12	3232 F14	7100 F5
	2000 C4	3233 H13	7101 F3
	2003 C5	3234 G13	7102 E3
C	2004 B6	3235 G11	7103 G3
	2005 B7	3236 I14	7104 G6
	2006 D7	3237 J13	7200 G10
	2007 E7	3238 K13	7201 K7
	2009 F8	3239 K13	7202 K6
	2100 E4	3240 A12	7203 I8
	2101 E5	3241 B12	7204 K8
	2102 G4	3242 J13	7205 I3
	2104 G7	3243 J13	7206 J9
	2105 F7	3244 J13	7207 H9
D	2106 E4	3245 I13	7211 F13
	2107 G8	3246 K13	7212 I14
	2110 B8	3247 K4	7213 G14
	2200 B8	3248 G11	7230 K4
	2201 C8	3249 C14	7231 L3
	2202 H5	3250 K4	7232 G12
	2203 C9	3251 L4	7250 I15
	2204 J1	3252 M6	9000 D7
	2205 J1	3253 L6	9002 C8
	2206 J2	3254 K3	9003 B5
	2207 K1	3255 K3	9004 F15
E	2208 L3	3256 K4	9006 A4
	2209 C7	3257 L6	9007 B4
	2210 L8	3258 J2	9008 C5
	2211 L8	3259 E16	9009 A7
	2212 K9	3260 K15	9010 A6
	2213 I9	3261 L4	9017 B6
	2214 A10	3262 L4	9018 B6
	2215 L7	3263 K16	9019 B6
	2216 H14	3264 K7	9020 B6
F	2217 K5	3265 K6	9213 H14
	2218 H5	3266 K6	9215 C8
	2219 K5	3267 K6	9220 B12
	2220 C13	3268 K15	9221 D12
	2221 D13	3269 K16	9222 B14
	2222 F13	3270 I15	9223 C14
	2223 J13	3271 J16	9224 D14
	2224 H10	3272 I16	9230 B12
	2225 B13	3273 A13	9231 D12
	2226 E13	3274 L5	9232 G13
G	2227 F15	3998 K14	9237 E15
	2228 H14	5000 B4	9270 J17
	2230 F16	5005 B5	9271 G15
	2231 I14	5101 E6	9272 F17
	2232 A12	5102 G5	9273 A13
	2233 B12	5103 G8	9275 I16
	2234 G13	5104 G8	9276 F12
	2235 D13	5201 I6	9278 J11
	2236 F16	5202 E10	9279 L8
	2237 E16	5203 E10	
H	2238 H13	5204 F15	
	2239 I13	5205 F13	
	2240 I2	5206 B9	
	2241 L7	5207 B9	
	2242 L6	5208 F13	
	2244 J11	5209 E9	
	2246 J13	5210 E9	
	2247 C14	5212 J9	
	2248 D14	5213 H9	
	2250 L4	5214 L8	
I	2251 K3	5219 C12	
	2252 L4	5220 C12	
	2253 M6	5221 D12	
	2260 I4	5222 C14	
	2261 I7	5223 C14	
	2262 K8	5224 D14	
	2263 I6	5225 I11	
	2264 J6	5226 K11	
	2270 J15	5227 F11	
	2271 I8	5228 G11	
J	2272 K8	5230 F14	
	2274 I12	5240 F9	
	2275 J12	5241 I9	
	2276 G12	5242 K9	
	2277 K7	5243 G14	
	3001 C3	5244 E15	
	3002 C3	5271 G15	
	3003 E8	5272 F17	
	3004 B4	5273 A13	
	3005 B6	5274 B15	
K	3006 A6	5275 G14	
	3007 E8	6004 B6	
	3008 E8	6005 B7	
	3009 F8	6006 C6	
	3101 E5	6007 C7	
	3102 E5	6008 B7	
	3103 E5	6009 D7	
	3104 G4	6101 D4	
	3106 G3	6103 G5	
	3107 G3	6104 G4	
L	3108 F3	6105 F4	
	3109 G4	6106 F7	
	3110 D5	6107 F7	
	3111 G5	6108 F3	
	3113 G7	6109 G11	
	3114 G7	6200 I8	
	3115 G7	6201 K8	
	3116 G8	6202 I9	
	3117 E4	6203 K9	
	3118 F3	6204 J6	
M	3119 D3	6205 J6	
	3200 C8	6206 C7	
	3202 I2	6207 H7	
	3203 I1	6208 J8	
	3204 J1	6209 K5	
	3205 J2	6210 D9	

CRT / SCAVEM panel

0031 B6	0297 F11	0383 A15	2338 B4	2350 G5	2370 F3	2400 A10	2409 B13	3324 E2	3335 D10	3344 E9	3353 G8	3363 C9	3376 H1	3386 H10	3402 B9	3411 A14	3420 A15	5380 G10
0032 E6	0297 G11	2325 E1	2340 D5	2351 F5	2371 H3	2401 C9	2410 B13	3325 D2	3336 A4	3345 E10	3354 E9	3364 E9	3377 G2	3387 G10	3403 B9	3412 B14	3421 B10	5381 F10
0033 H6	0297 G13	2330 A5	2341 C5	2352 G5	2372 D2	2402 B9	2411 A13	3327 E2	3337 A5	3346 C4	3355 E10	3369 F2	3378 G2	3392 H13	3404 B10	3413 C14	3422 B15	5400 A9
0224 B1	0297 G13	2331 A5	2342 E5	2353 G9	2374 G2	2403 B9	2412 A15	3329 G13	3338 B4	3347 C5	3356 F4	3370 H2	3379 H2	3396 G13	3405 A12	3414 A13	3999 H1	5404 B10
0235 C11	0297 G14	2332 B5	2343 D9	2354 F5	2376 H1	2404 B10	2420 A13	3330 A5	3339 B5	3348 D4	3357 F5	3371 G3	3380 G10	3397 G14	3406 B11	3415 A11	5336 A4	5414 B14
0297 D11	0297 G14	2333 A9	2344 C5	2356 H7	2381 F10	2405 A11	2421 F1	3331 A6	3340 D5	3349 D5	3358 G4	3372 D2	3381 F10	3398 G14	3407 B12	3416 A11	5346 C4	6324 E1
0297 E11	0297 G15	2334 A5	2346 E7	2357 F7	2393 H13	2406 B12	2422 B10	3332 A5	3341 C6	3350 F5	3359 G5	3373 F2	3382 H10	3399 G15	3408 A13	3417 A12	5356 F4	6325 E3
0297 E11	0334 C1	2336 B7	2347 C7	2358 G4	2397 H14	2407 A13	2423 A10	3333 A8	3342 D5	3351 F6	3360 C8	3374 F1	3383 H13	3400 A10	3409 C13	3418 A11	5372 D1	6335 D10
0297 F11	0340 A1	2337 A7	2348 D4	2360 C8	2398 H14	2408 C13	2424 A11	3334 D9	3343 D8	3352 G5	3361 C8	3375 G2	3385 H12	3401 C9	3410 A14	3419 B12	5373 F1	6345 D10



6355 D9	7338 B4	7414 A14	9384 B14
6370 G3	7340 C6	7415 B14	9385 G11
6371 H3	7348 E4	9336 A4	9386 H12
6372 C8	7350 F6	9346 C4	9387 G10
6373 H11	7358 G4	9356 F4	9390 H11
6409 B13	7374 G1	9380 F10	
6410 B13	7377 G2	9381 A10	
7324 E2	7400 A11	9382 G10	
7330 A6	7405 A12	9383 A14	

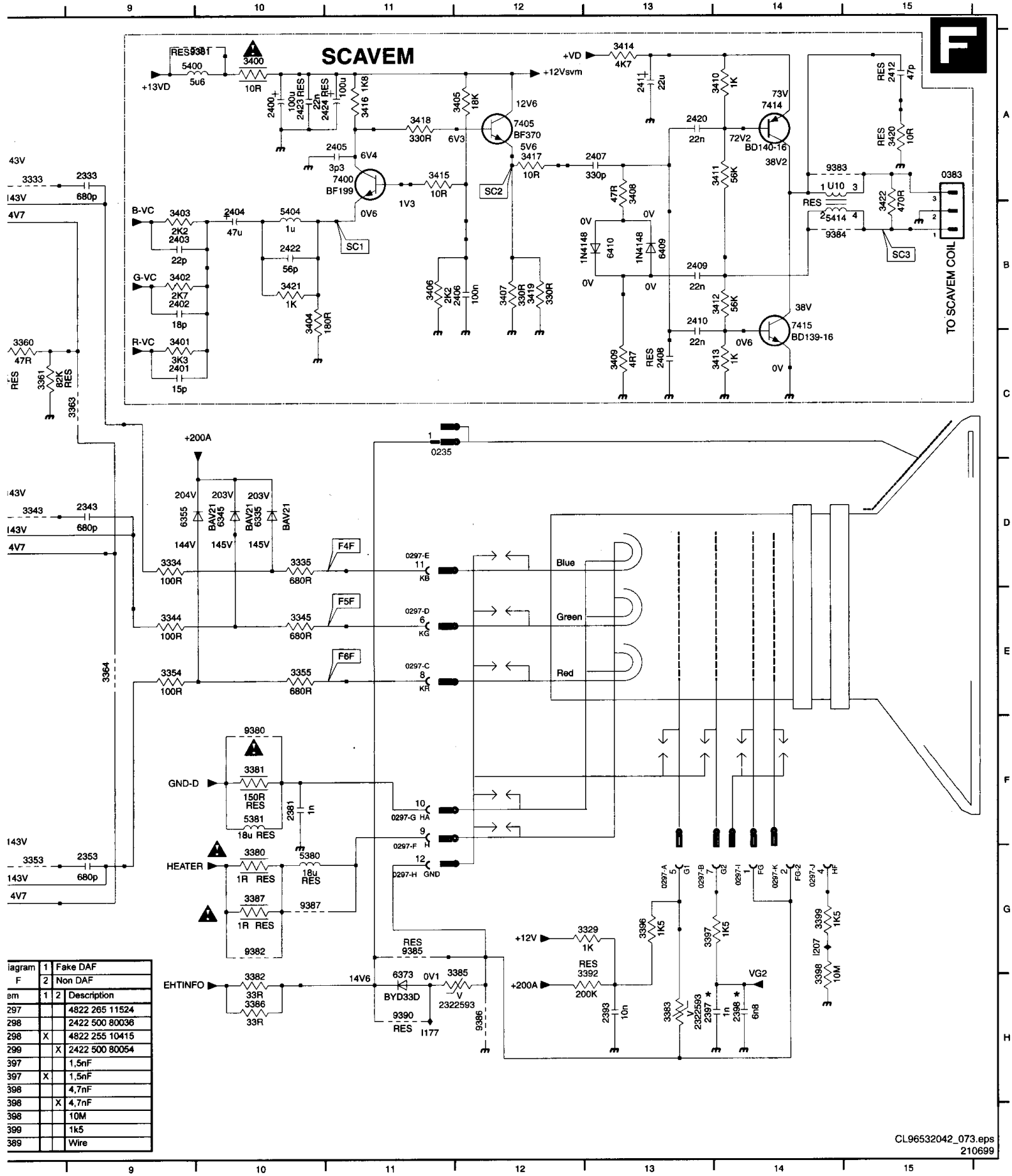
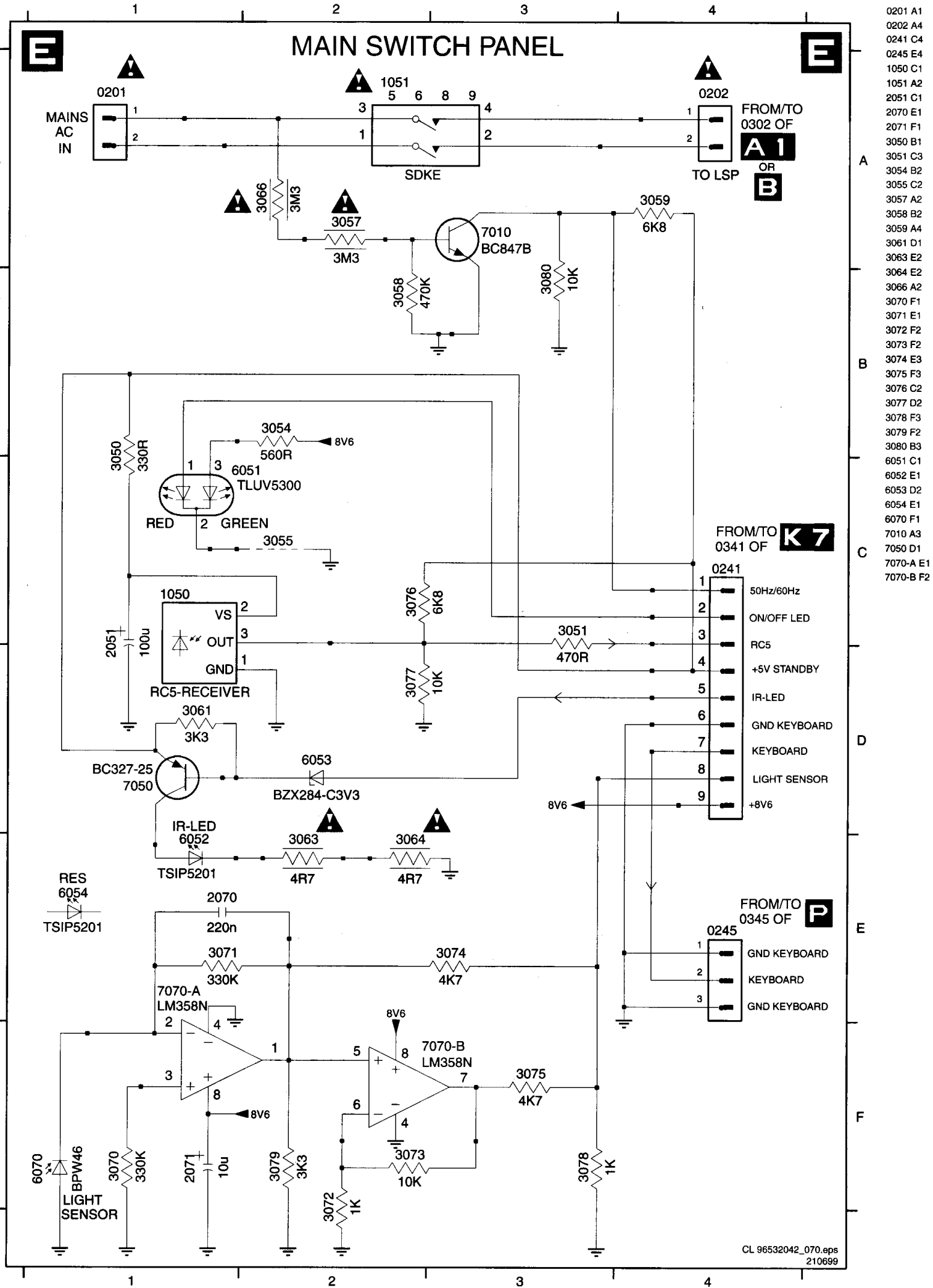


Diagram			
F	1		Fake DAF
	2		Non DAF
Item	1	2	Description
2397			4822 265 11524
2398			2422 500 80036
2398	X		4822 255 10415
2399		X	2422 500 80054
3397			1,5nF
3397	X		1,5nF
3398			4,7nF
3398		X	4,7nF
3398			10M
3399			1k5
9389			Wire

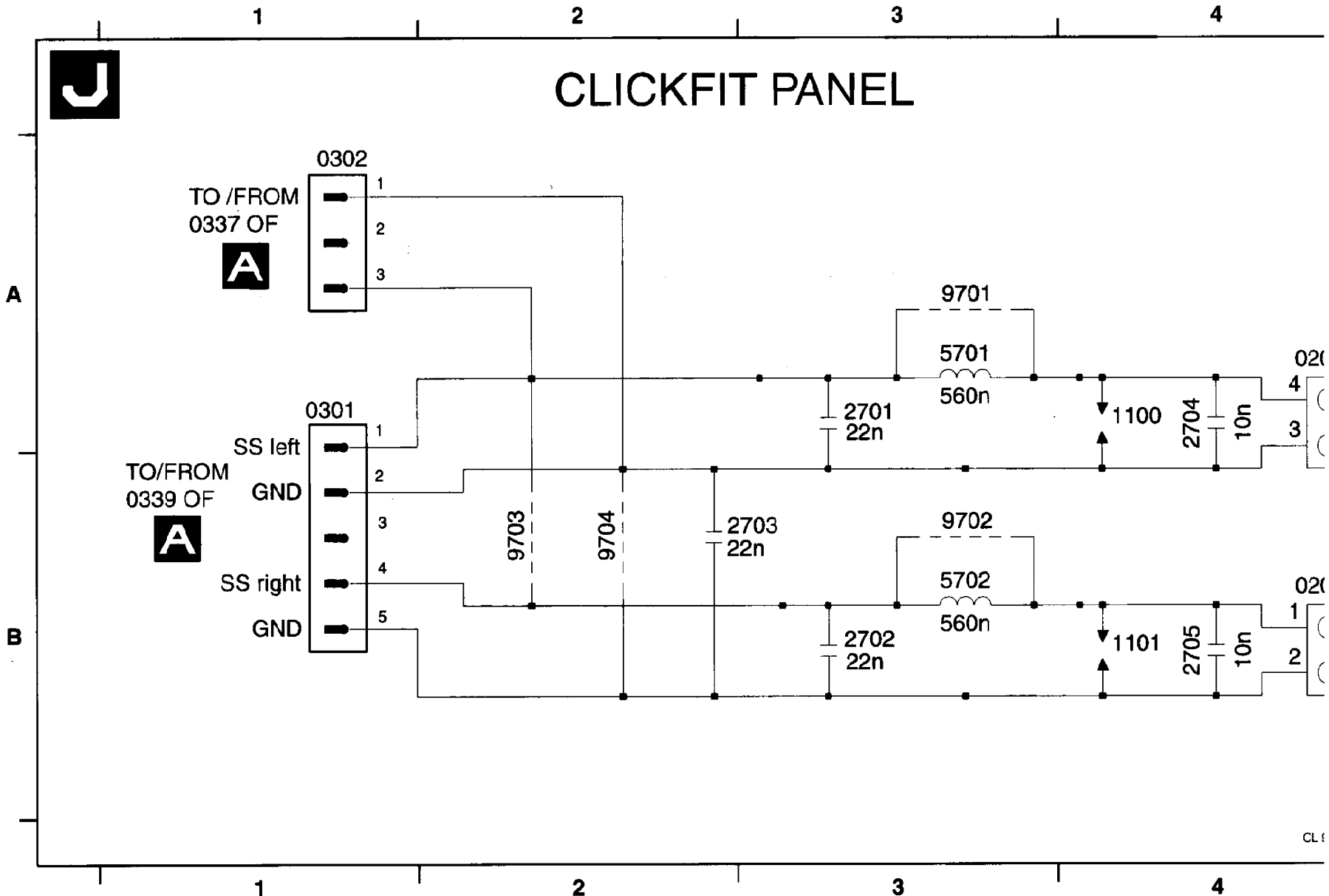
Mainsswitch panel

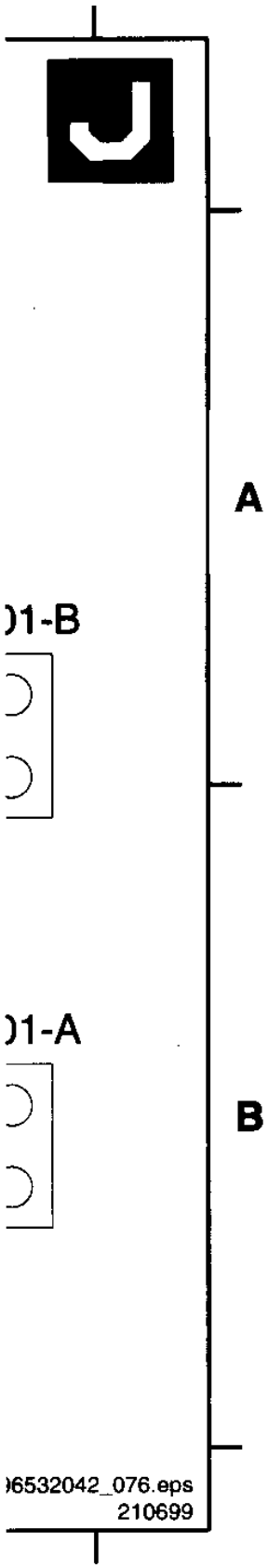


0201 A1
0202 A4
0241 C4
0245 E4
1050 C1
1051 A2
2051 C1
2070 E1
2071 F1
3050 B1
3051 C3
3054 B2
3055 C2
3057 A2
3058 B2
3059 A4
3061 D1
3063 E2
3064 E2
3066 A2
3070 F1
3071 E1
3072 F2
3073 F2
3074 E3
3075 F3
3076 C2
3077 D2
3078 F3
3079 F2
3080 B3
6051 C1
6052 E1
6053 D2
6054 E1
6070 F1
7010 A3
7050 D1
7070-A E1
7070-B F2

Clickfit panel

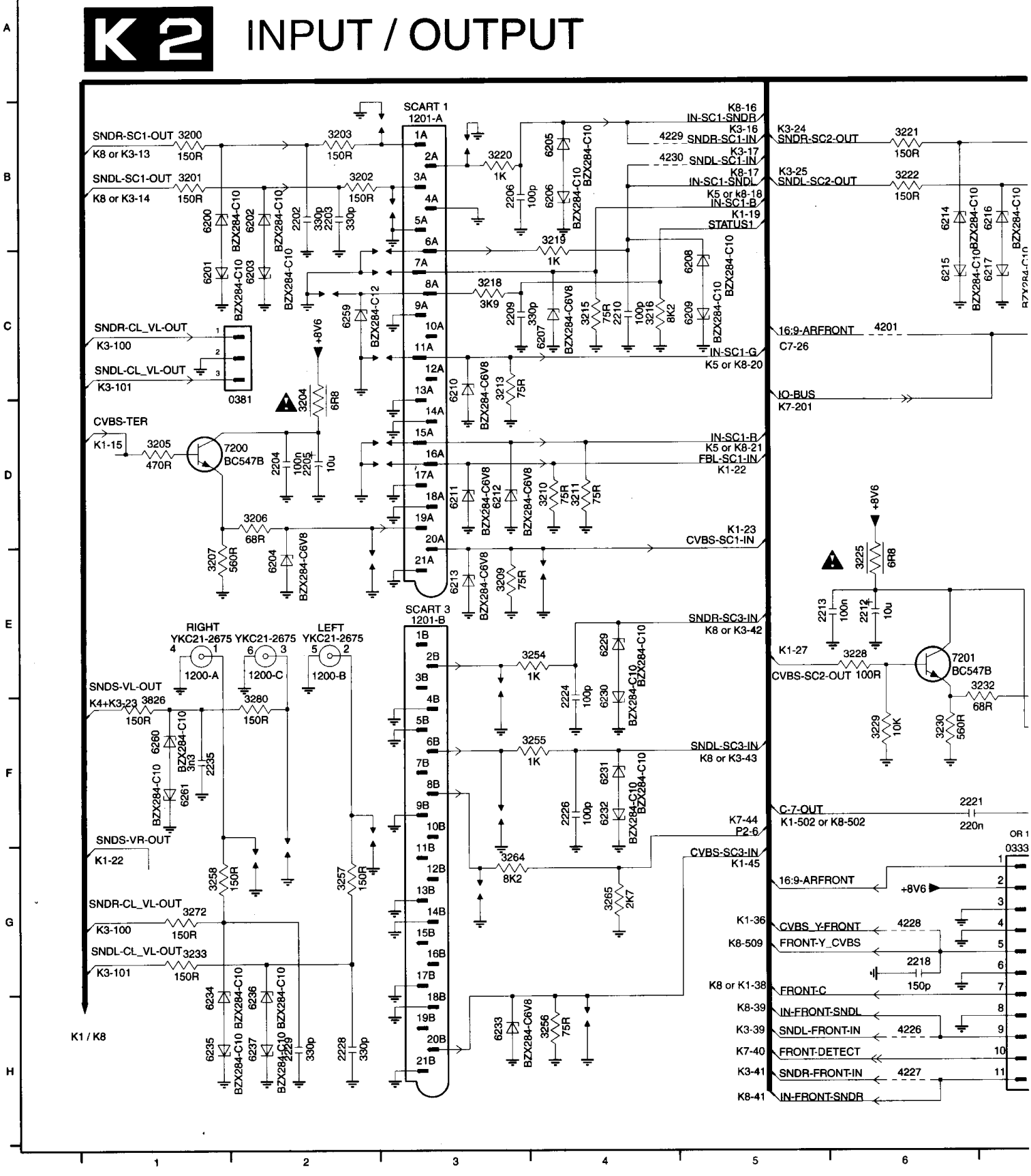
0201-A B4	0302 A1	2701 A3	2704 A4	5701 A3	9702 B3
0201-B A4	1100 A4	2702 B3	2705 B4	5702 B3	9703 B2
0301 A1	1101 B4	2703 B3	3998 B3	9701 A3	9704 B2




J
A
)1-B
)1-A
B
)6532042_076.eps
210699

Small signal panel

0333 G7	1202-B E10	2212 E6	2222 F9	3200 B1	3209 E3	3220 B3	3230 F6	3243 G8	3253 F8	3270 E11	4227 H6	6204 E2	6213 E3
0376 H8	2126 H9	2213 E5	2224 F4	3201 B1	3210 D4	3221 B6	3231 H12	3244 B11	3254 E4	3271 F11	4228 G6	6205 B4	6214 B6
0381 C1	2202 B2	2215 B7	2226 F4	3202 B2	3211 D4	3222 B6	3232 E7	3245 C10	3255 F4	3272 G1	4229 B4	6206 B4	6215 C6
1200-A E1	2203 B2	2216 B7	2228 H2	3203 B2	3212 E12	3223 B7	3233 G1	3246 B11	3256 H4	3273 G11	4230 B4	6207 C4	6216 B7
1200-B E2	2204 D2	2217 B11	2229 H2	3204 D2	3213 C3	3224 B7	3235 D11	3247 F8	3257 G2	3274 G11	4235 D11	6208 C5	6217 C7
1200-C E2	2205 D2	2218 G6	2235 F1	3205 D1	3215 C4	3225 E6	3236 D11	3248 G8	3258 G1	3280 F2	6200 B1	6209 C5	6218 C7
1201-A B3	2206 B3	2219 C11	2240 E11	3206 D2	3216 C4	3227 G12	3240 C11	3249 G8	3264 G3	3826 F1	6201 C1	6210 C3	6219 E7
1201-B E3	2209 C3	2220 C11	2241 F11	3207 E1	3218 C3	3228 E6	3241 C11	3250 F7	3265 G4	4201 C6	6202 B2	6211 D3	6220 B11
1202-A B10	2210 C4	2221 F6	3147 H8	3208 E11	3219 B4	3229 F6	3242 C12	3252 F8	3266 F8	4226 H6	6203 C2	6212 D3	6221 B11



6222 C11	6231 F4	6241 E11	7203 F8
6223 C12	6232 F4	6242 F11	7204 F8
6224 C12	6233 H3	6243 F11	
6225 C10	6234 H1	6244 H11	
6226 D10	6235 H1	6259 C2	
6227 D11	6236 H2	6260 F1	
6228 E10	6237 H2	6261 F1	
6229 E4	6239 C10	7200 D1	
6230 F4	6240 E11	7201 E6	

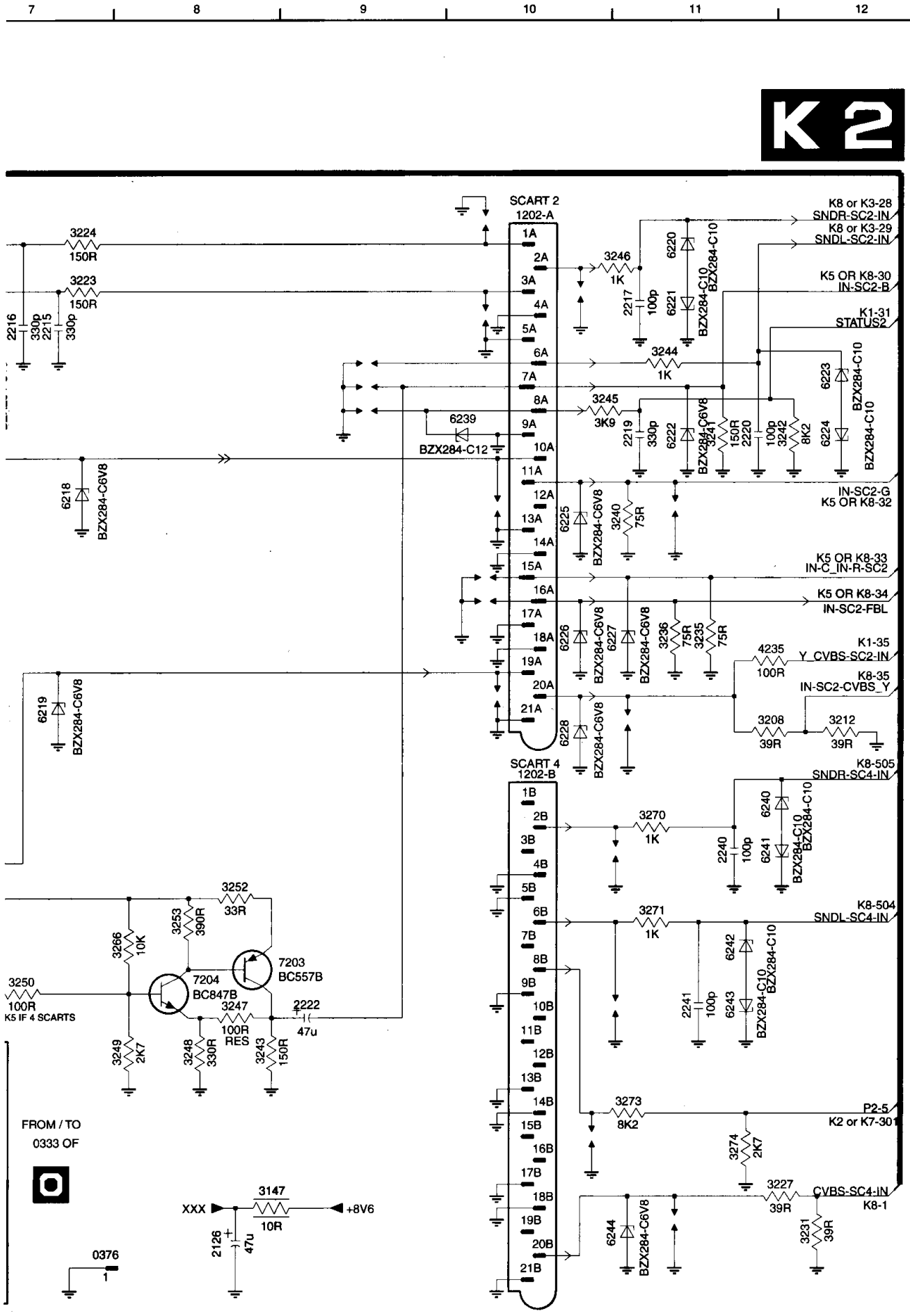


Diagram	1	3 x scart
K2	2	4 x scart

Item	1	2	Description
1201			4822 267 60385
1201	2	3	4822 267 10771
1202	2		4822 267 60385
1202		3	4822 267 10771
2224	2	3	100pF
2226	2	3	100pF
2240		3	100pF
2241		3	100pF
3227		3	39Ω
3231		3	39Ω
3254	2	3	1k
3255	2	3	1k
3256	2	3	75Ω
3264	2	3	8k2
3265	2	3	2k7
3270		3	1k
3271		3	1k
3273		3	8k2
3274		3	2k7
6229	2	3	PDZ10B
6230	2	3	PDZ10B
6231	2	3	PDZ10B
6232	2	3	BZX284-C10
6233	2	3	PDZ6.8B
6240		3	PDZ10B
6241		3	PDZ10B
6242		3	PDZ10B
6243		3	PDZ10B
6244		3	PDZ6.8B

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Small signal panel

0310 H2	1108 D6	2102 B4	2110 C8	2120 A3	2504 F10	2521 E13	2534 B13	2541 A8	2555 G11	2562 I13	3102 A2	3111 F5	3118 C9	3134 D5	3141 B1	3150 A3	3545 F9
1101 D3	1109 B6	2104 B4	2111 C8	2121 A3	2505 F10	2522 E14	2535 B10	2545 E9	2556 H11	2563 I13	3103 B2	3112 G4	3119 D7	3135 G7	3142 B10	3151 A3	3546 G9
1102 B3	1525 E14	2105 B5	2112 A10	2125 B2	2506 F10	2525 E14	2536 B10	2550 G11	2557 G11	2564 I13	3104 B1	3113 G4	3121 G7	3136 D8	3143 A10	3521 E13	3551 G1
1104 E6	1526 E14	2106 C4	2116 B1	2127 A4	2510 C13	2526 E14	2537 B10	2551 H15	2558 I12	2565 F11	3106 C4	3114 G5	3122 G6	3137 D9	3145 F8	3530 B11	3552 G1
1105 F6	1527 E15	2107 C4	2117 D9	2501 F9	2511 C13	2527 E15	2538 A7	2552 H15	2559 I12	2566 F9	3107 D5	3115 G5	3123 G6	3138 D8	3146 A2	3531 B11	3553 G1
1106 E7	1528 E15	2108 D4	2118 D8	2502 F10	2512 C13	2528 E15	2539 A7	2553 F15	2560 I11	2567 G11	3109 E4	3116 F4	3124 B7	3139 E8	3148 E7	3532 B13	3554 F1
1107 E8	2101 A4	2109 C8	2119 A9	2503 F10	2520 E13	2532 B13	2540 B8	2554 F11	2561 I11	2569 H3	3110 F4	3117 F5	3133 B5	3140 B1	3149 F7	3538 A8	3556 H1

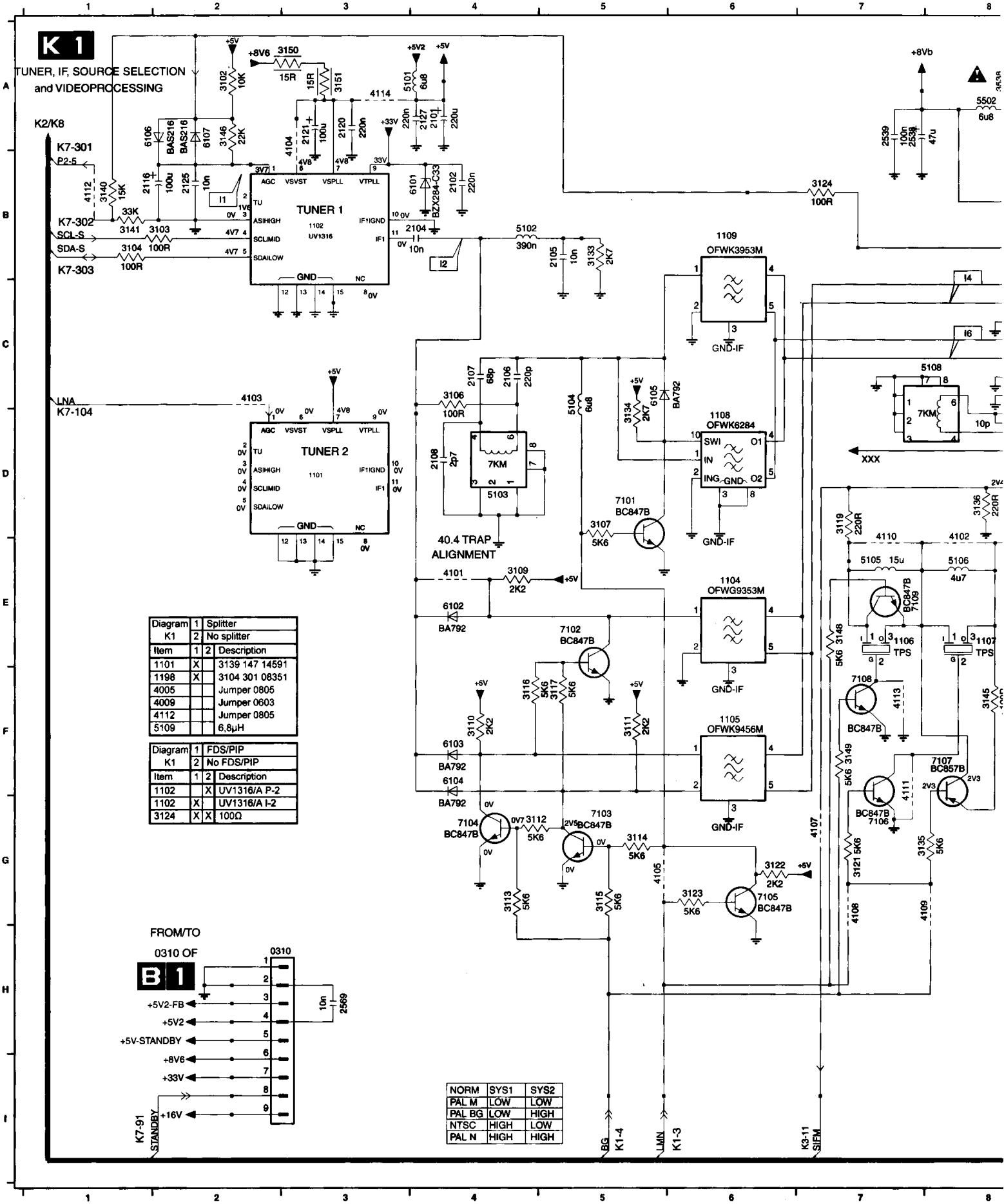
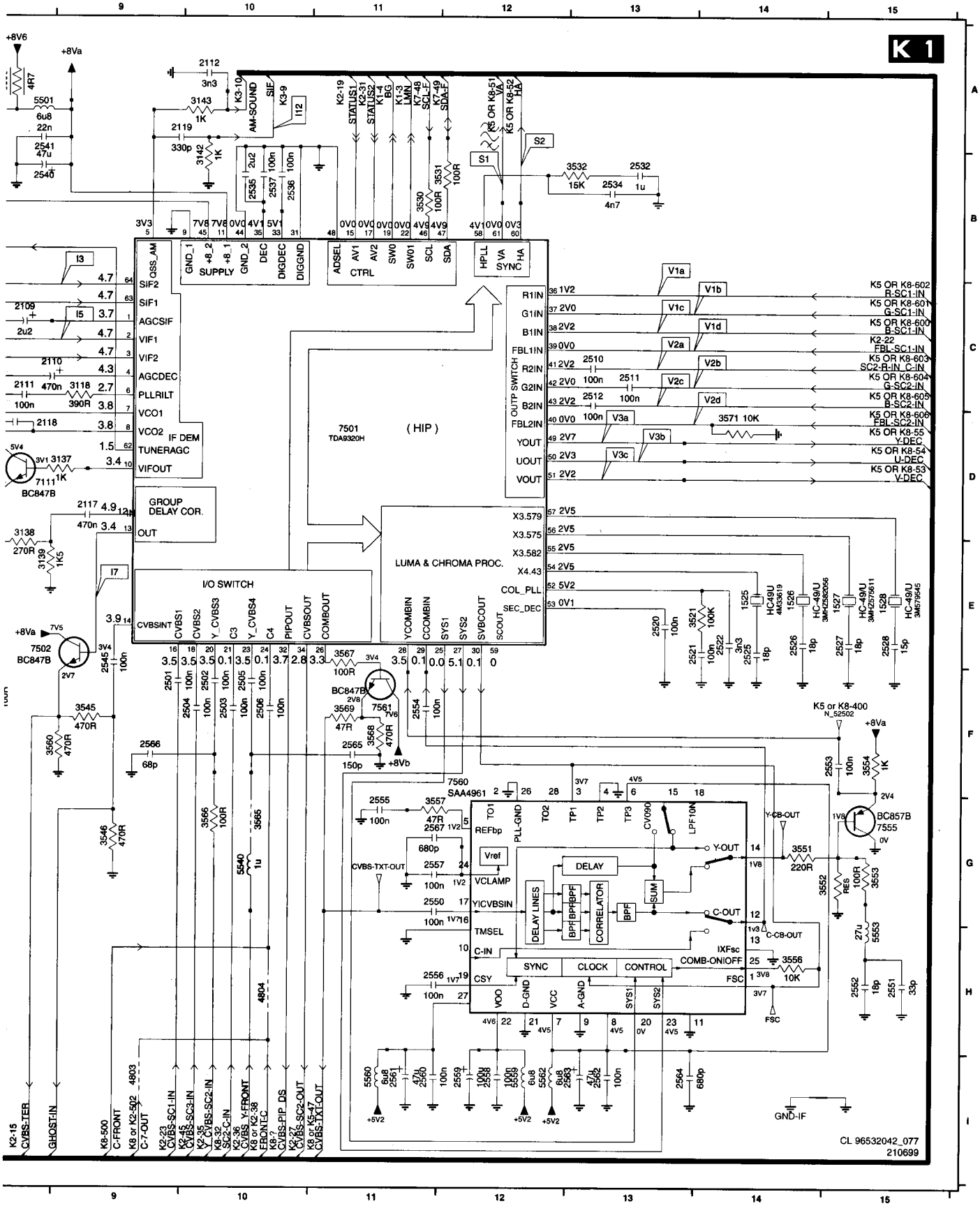


Diagram K1	1	2	Splitter / No splitter
Item	1	2	Description
1101	X		3139 147 14591
1198	X		3104 301 08351
4005			Jumper 0805
4009			Jumper 0603
4112			Jumper 0805
5109			6,8µH

Diagram K1	1	2	FDS/PIP / No FDS/PIP
Item	1	2	Description
1102		X	UV1316/A P-2
1102	X		UV1316/A I-2
3124	X	X	100Ω

NORM	SYS1	SYS2
PAL M	LOW	LOW
PAL BG	LOW	HIGH
NTSC	HIGH	LOW
PAL N	HIGH	HIGH

	3557 G11	3571 D14	4107 G7	4114 A3	5105 E7	5559 I12	6105 C5	7105 G6	7502 E8
	3560 F8	3999 A6	4108 G7	4803 I9	5106 E8	5560 I11	6106 A1	7106 G7	7555 G15
4	3565 G10	4101 E4	4109 G8	4804 H10	5108 C7	5562 I12	6107 A2	7107 F8	7560 F12
5	3566 G10	4102 E8	4110 E7	5101 A4	5501 A8	6101 B4	7101 D5	7108 F7	7561 F11
5	3567 E11	4103 C2	4111 F7	5102 B4	5502 A8	6102 E4	7102 E5	7109 E7	
5	3568 F11	4104 A3	4112 B1	5103 D4	5540 G10	6103 F4	7103 G5	7111 D9	
4	3569 F11	4105 G5	4113 F7	5104 C5	5553 H15	6104 F4	7104 G4	7501 D11	



Small signal panel

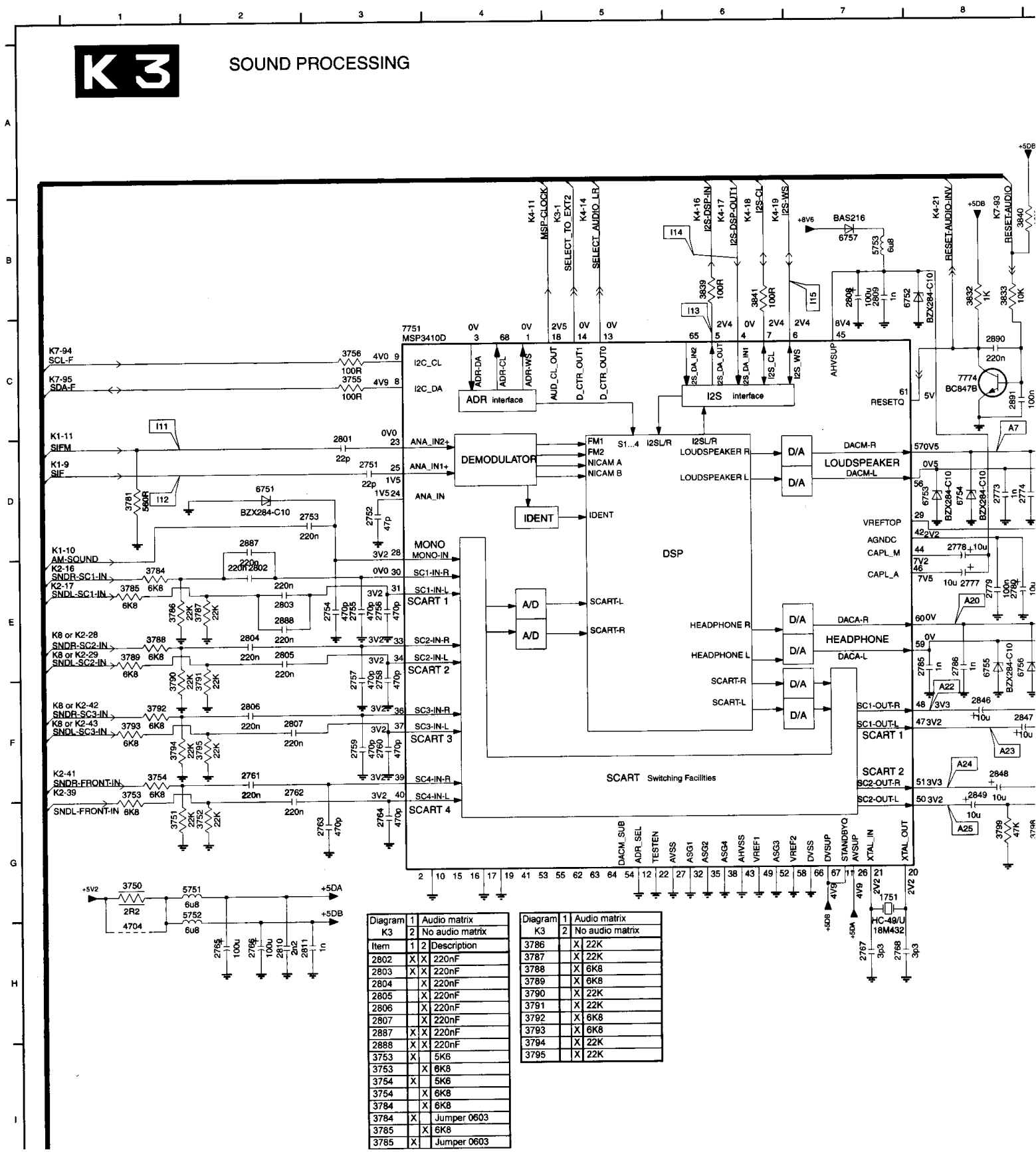


Diagram K3	1	2	Audio matrix / No audio matrix
Item	1	2	Description
2802	X	X	220nF
2803	X	X	220nF
2804		X	220nF
2805		X	220nF
2806		X	220nF
2807		X	220nF
2887	X	X	220nF
2888	X	X	220nF
3753	X		5K6
3753		X	6K8
3754	X		5K6
3754		X	6K8
3784		X	6K8
3784	X		Jumper 0603
3785		X	6K8
3785	X		Jumper 0603

Diagram K3	1	2	Audio matrix / No audio matrix
3786		X	22K
3787		X	22K
3788		X	6K8
3789		X	6K8
3790		X	22K
3791		X	22K
3792		X	6K8
3793		X	6K8
3794		X	22K
3795		X	22K

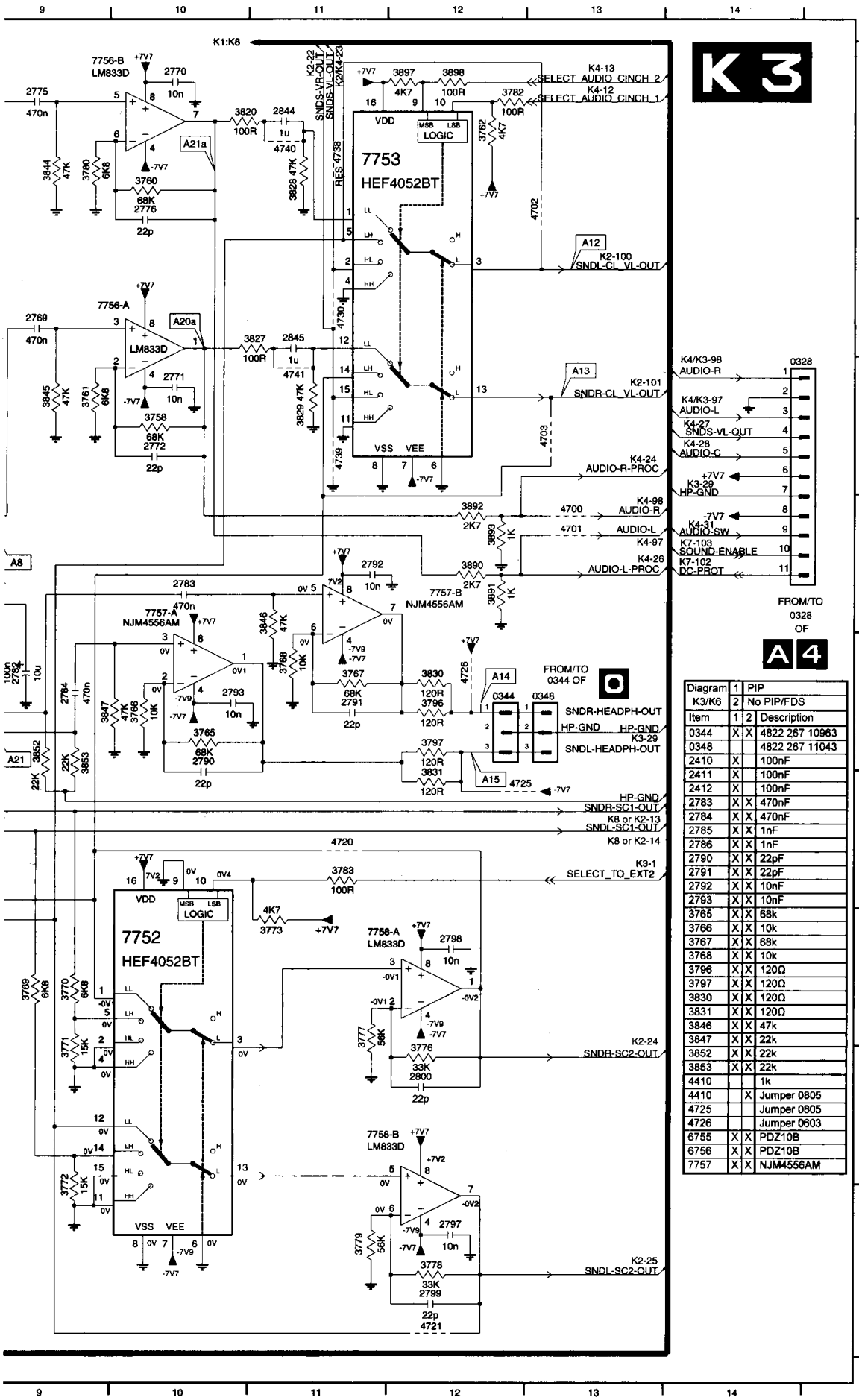
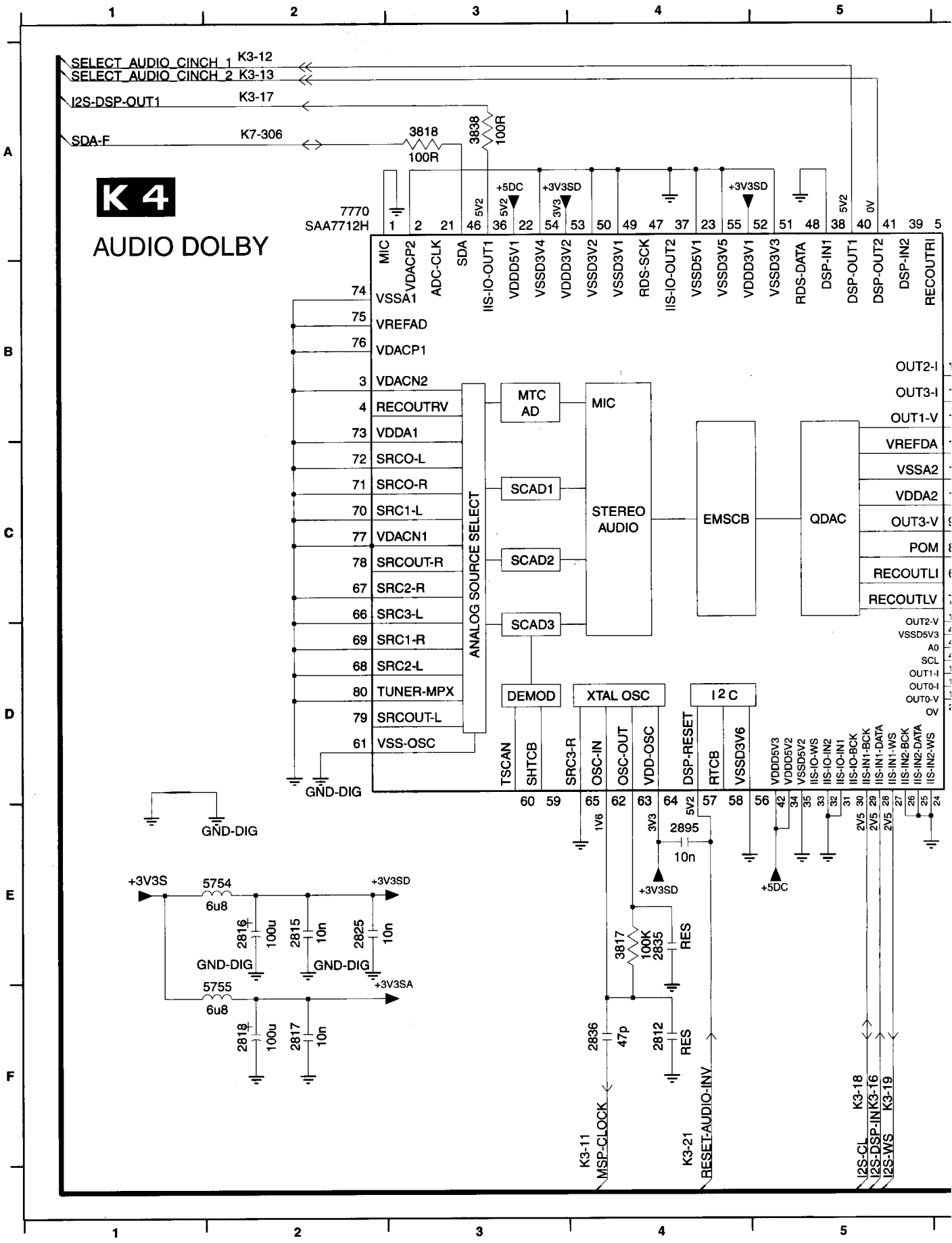


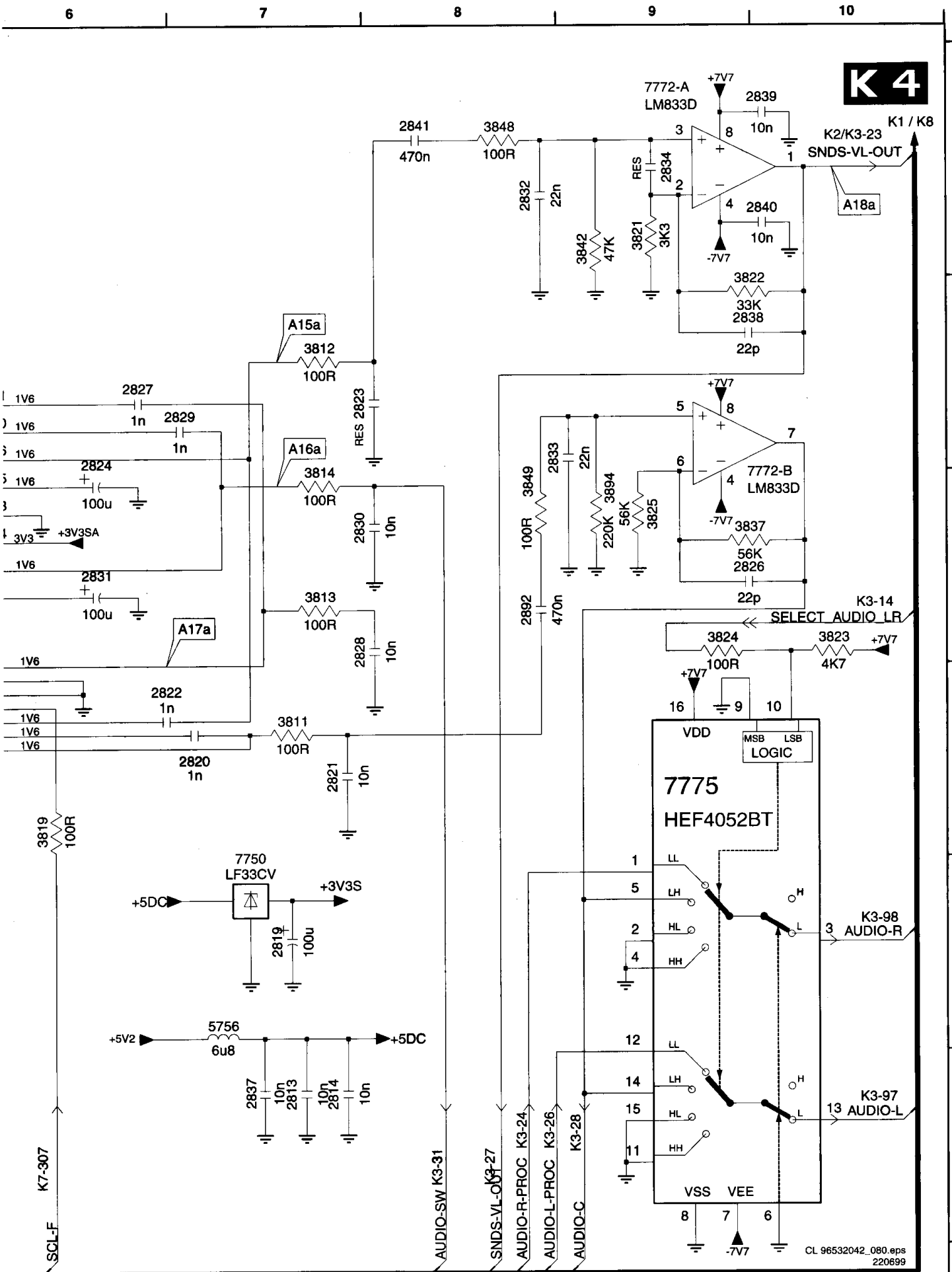
Diagram K3/K6	1	2	PIP / No PIP/FDS
Item	1	2	Description
0344	X	X	4822 267 10963
0348			4822 267 11043
2410	X		100nF
2411	X		100nF
2412	X		100nF
2783	X	X	470nF
2784	X	X	470nF
2785	X	X	1nF
2786	X	X	1nF
2790	X	X	22pF
2791	X	X	22pF
2792	X	X	10nF
2793	X	X	10nF
3765	X	X	68k
3766	X	X	10k
3767	X	X	68k
3768	X	X	10k
3796	X	X	120Ω
3797	X	X	120Ω
3830	X	X	120Ω
3831	X	X	120Ω
3846	X	X	47k
3847	X	X	22k
3852	X	X	22k
3853	X	X	22k
4410			1k
4410		X	Jumper 0805
4725			Jumper 0805
4726			Jumper 0603
6755	X	X	PDZ10B
6756	X	X	PDZ10B
7757	X	X	NJM4556AM

0328 C14	3829 C11	3890	Jumper 0603
0344 E12	3830 E12	3891	1k
0348 E13	3831 F12	3892	2k7
1751 G7	3832 B8	3892	Jumper 0805
2751 D3	3833 B8	3893	1k
2752 D3	3839 B6	3894	47k
2753 D3	3840 B8	3897	4k7
2754 E3	3841 B6	3898	100•
2755 E3	3844 A9	4700	Jumper 0805
2756 E3	3845 C9	4701	Jumper 0805
2757 F3	3846 D11	4702	Jumper 0603
2758 F3	3847 E9	4703	Jumper 0603
2759 F3	3852 E9	4730	Jumper 0603
2760 F3	3853 E9	4739	Jumper 0805
2761 F2	3890 D12	5754	6,8µH
2762 F2	3891 D12	5755	6,8µH
2763 G3	3892 D12	5756	6,8µH
2764 G3	3893 D12	6753	PDZ10B
2765 H2	3897 A12	6754	PDZ10B
2766 H2	3898 A12	7750	LF33CV
2767 H7	4700 D13	7753	HEF4052BT
2768 H7	4701 D13	7756	LM833DR2
2769 B9	4702 A13	7770	SAA7712H/N203
2770 A10	4703 C13	7772	LM833DR2
2771 C10	4704 H1	7775	HEF4052B
2772 C10	4720 F11		
2773 D8	4721 I12		
2774 D8	4725 F12		
2775 A9	4726 E12		
2776 A10	4730 B11		
2777 E8	4738 A11		
2778 D8	4739 C11		
2779 E8	4740 A11		
2780 E8	4741 C11		
2781 E9	5751 G2		
2782 E9	5752 G2		
2783 D10	5753 B7		
2784 E9	6751 D2		
2785 E8	6752 B8		
2786 E8	6753 D8		
2790 E10	6754 D8		
2791 E11	6755 E8		
2792 D11	6756 E8		
2793 E10	6757 B7		
2797 I12	7751 C3		
2798 G12	7752 G10		
2799 I12	7753 A11		
2800 H12	7756-A B9		
2801 D3	7756-B A9		
2802 E2	7757-A D10		
2803 E2	7757-B D12		
2804 E2	7758-A G11		
2805 E2	7758-B H11		
2806 F2	7774 C8		
2807 F2			
2808 B7			
2809 B7			
2810 H2			
2811 H2			
2844 A11			
2845 B11			
2846 F8			
2847 F8			
2848 F8			
2849 G8			
2887 D2			
2888 E2			
2890 C8			
2891 C8			
3750 G1			
3751 G1			
3752 G2			
3753 F1			
3754 F1			
3755 C3			
3756 C3			
3758 C10			
3760 A10			
3761 C9			
3762 A12			
3765 E10			
3766 E10			
3767 E11			
3768 E11			
3769 G9			
3770 G9			
3771 H9			
3772 I9			
3773 G11			
3776 H12			
3777 G11			
3778 I12			
3779 I11			
3780 A9			
3781 D1			
3782 A12			
3783 F11			
3784 E1			
3785 E1			
3786 E1			
3787 E2			
3788 E1			
3789 E1			
3790 F1			
3791 F2			
3792 F1			
3793 F1			
3794 F1			
3795 F2			
3796 E12			
3797 E12			
3798 G9			
3799 G8			
3820 A10			
3827 B11			
3828 A11			

Diagram K3/K4	1	2	Dolby prologic / Multi channel sound
Item	1	2	Description
2769	X	X	470nF
2770	X		10nF
2771	X		10nF
2772	X		22pF
2773	X		1nF
2774	X		1nF
2775	X	X	470nF
2776	X		22pF
2813	X		10nF
2814	X		10nF
2815	X		10nF
2816	X		100µF
2817	X		10nF
2818	X		100µF
2819	X		100µF
2820	X		1nF
2821	X		10nF
2822	X		1nF
2824	X		100µF
2825	X		10nF
2826	X		22pF
2827	X		1nF
2828	X		10nF
2829	X		1nF
2830	X		10nF
2831	X		100µF
2832	X		22nF
2833	X		22nF
2836	X		47pF
2837	X		10nF
2838	X		22pF
2839	X		10nF
2840	X		10nF
2841	X		470nF
2844	X		1µF
2845	X		1µF
2892	X		470nF
2895	X		10nF
3758	X		47k
3760	X		47k
3761	X		6k8
3762	X		4k7
3780	X		6k8
3782	X		100•
3811	X		100•
3812	X		100•
3813	X		100•
3814	X		100•
3817	X		100k
3818	X		100•
3819	X		100•
3820	X		100•
3821	X		3k3
3822	X		33k
3823	X		4k7
3824	X		100•
3825	X		56k
3827	X		100•
3828	X		47k
3829	X		47k
3837	X		56k
3838	X		100•
3839	X		100•
3841	X		100•
3842	X		47k
3844	X		47k
3845	X		47k
3848	X		100•
3849	X		100•
3890	X		2k7
3890		X	Jumper 0603
3891	X		1k
3892	X		2k7
3892			Jumper 0805
3893	X		1k
3894	X		47k
3897	X		4k7
3898	X		100•
4700			Jumper 0805
4701			Jumper 0805
4702		X	Jumper 0603
4703		X	Jumper 0603
4730	X		Jumper 0603
4739	X		Jumper 0805
5754	X		6,8µH
5755	X		6,8µH
5756	X		6,8µH
6753	X		PDZ10B
6754	X	X	PDZ10B
7750	X		LF33CV
7753	X		HEF4052BT
7756	X		LM833DR2
7770	X		SAA7712H/N203
7772	X		LM833DR2
7775	X		HEF4052B

Small signal panel





2812 F4
2813 F7
2814 F7
2815 E2
2816 E2
2817 F2
2818 F2
2819 E7
2820 D7
2821 D7
2822 D6
2823 B8
2824 B6
2825 E2
2826 C9
2827 B6
2828 C8
2829 B7
2830 C8
2831 C6
2832 A8
2833 B9
2834 A9
2835 E4
2836 F4
2837 F7
2838 B9
2839 A10
2840 A10
2841 A8
2892 C8
2895 E4
3811 D7
3812 B7
3813 C7
3814 C7
3817 E4
3818 A3
3819 D6
3821 A9
3822 B9
3823 C10
3824 C9
3825 C9
3837 C9
3838 A3
3842 A9
3848 A8
3849 C8
3894 C9
5754 E2
5755 F2
5756 E7
7750 E7
7770 A2
7772-A A9
7772-B C9
7775 D9

Small signal panel

0341 B6 2003 F15 2012 B11 2020 J6 2028 B12 2039 J4 2047 K8 3003-A E9 3005-A C10 3009-C B9 3017 J6 3023-C K12 3028-A E9 3030-D J14 3035 H8 3043 J17 3049-C D2 3051-C E2 3053-C F2
0355 B5 2005 B15 2013 K11 2021 J9 2029 J17 2040 C7 2049 B18 3003-B D10 3005-B C9 3009-D C10 3018 J6 3023-D K13 3028-B E10 3031 F10 3036-A G8 3047 K10 3049-D D2 3051-D E2 3053-D F2
0356 B4 2006 F14 2014 H10 2022 K10 2030 J15 2041 K15 2050 H14 3003-C D9 3005-C C10 3010 C9 3019 K6 3024 K12 3028-C E9 3032 F9 3036-B G8 3048-A K13 3050-A D2 3052-A E2 3054-A F2
0375 E9 2007 F14 2015 J10 2023 K10 2031 B18 2042 K15 2051 H14 3003-D A9 3005-D A9 3011 B9 3020 K6 3026 K14 3028-D E10 3033-A G9 3036-C G8 3048-B K13 3050-B D2 3052-B E2 3054-B F2
0399 E16 2008 B12 2016 H10 2024 I14 2032 J16 2043 K15 2052 H14 3004-A D10 3006 B9 3013 J5 3021 J7 3027-A F9 3029 K14 3033-B G10 3036-D G8 3048-C K13 3050-C D2 3052-C E2 3054-C F2
1001 H10 2009 B12 2017 J6 2025 K10 2035 L17 2044 K15 2053 H14 3004-B D9 3007 B9 3014 J5 3022 J7 3027-B F10 3030-A J15 3033-C G9 3039 H7 3048-D K13 3050-D D2 3052-D E2 3054-D G2
2001 K16 2010 B12 2018 J5 2026 K9 2037 J4 2045 F14 2054 H16 3004-C D10 3009-A E9 3015 J5 3023-A K12 3027-C F9 3030-B J14 3033-D F10 3041 K16 3049-A C2 3051-A D2 3053-A F2 3055-A G2
2002 J16 2011 B11 2019 K7 2027 B12 2038 J5 2046 J15 3001 C7 3004-D D9 3009-B E10 3016 J6 3023-B K12 3027-D F10 3030-C J15 3034 I8 3042 K16 3049-B C2 3051-B E2 3053-B F2 3055-B G2

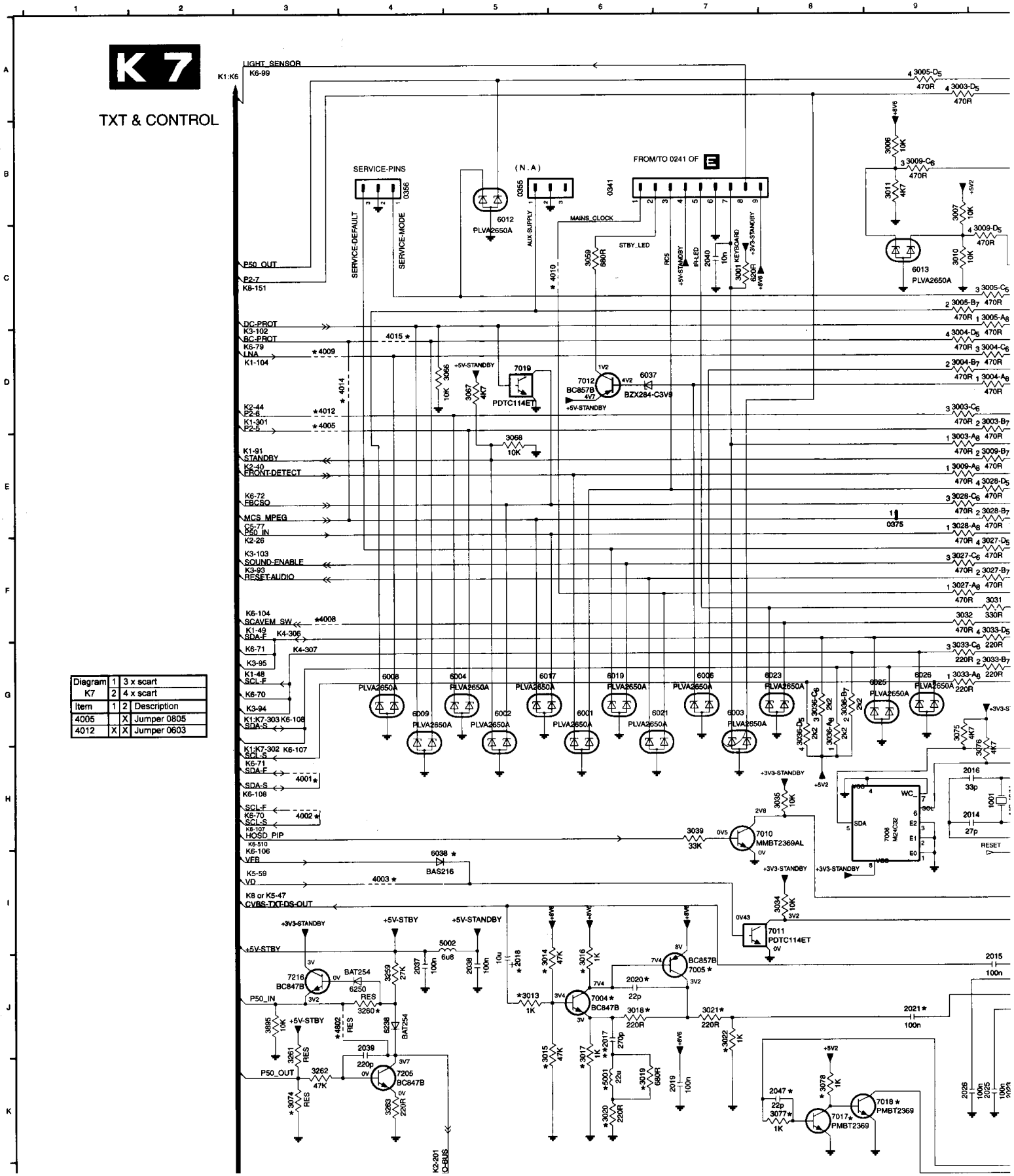
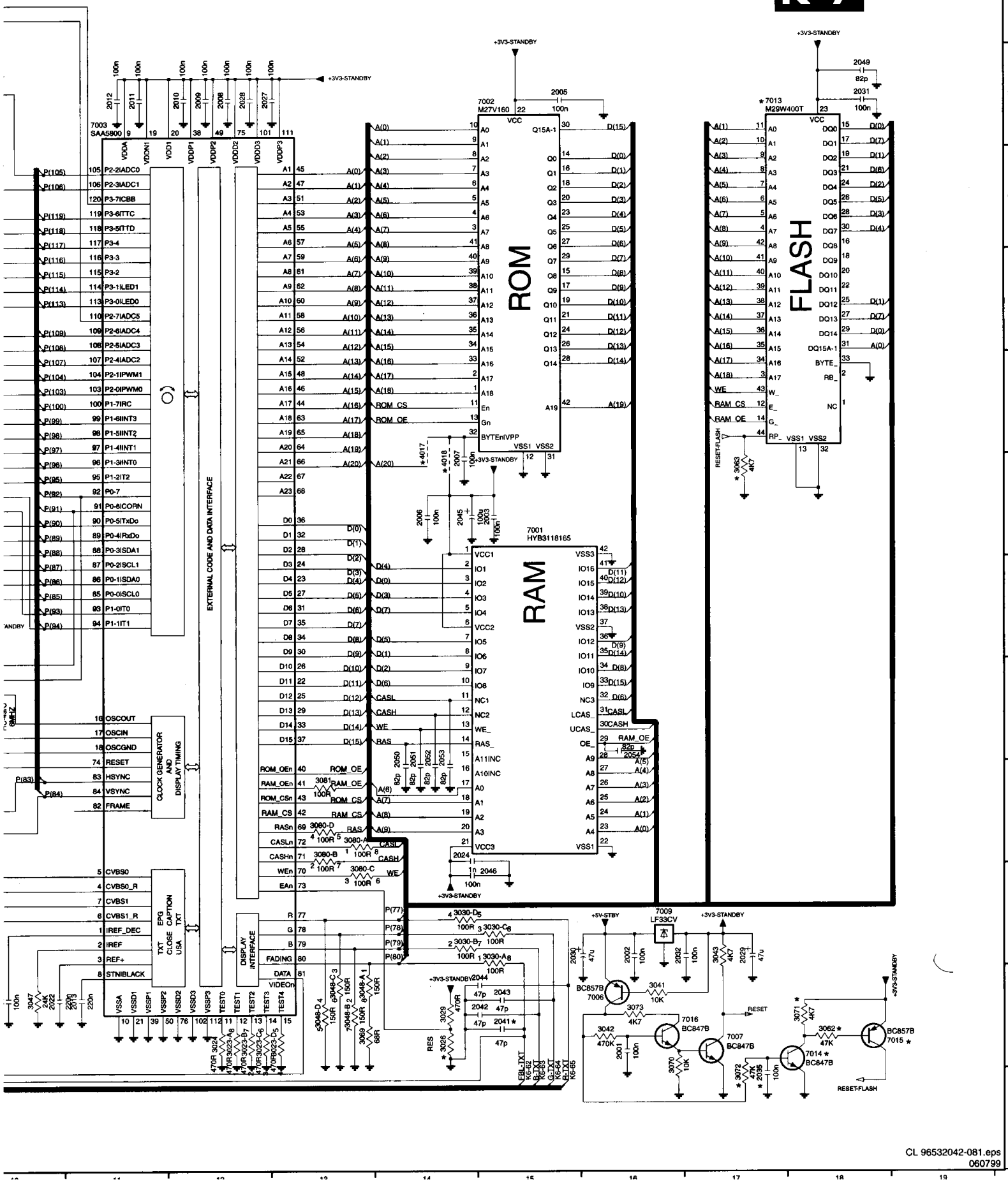


Diagram	1	3 x scart
K7	2	4 x scart
Item	1	2 Description
4005		X Jumper 0805
4012	X	X Jumper 0603

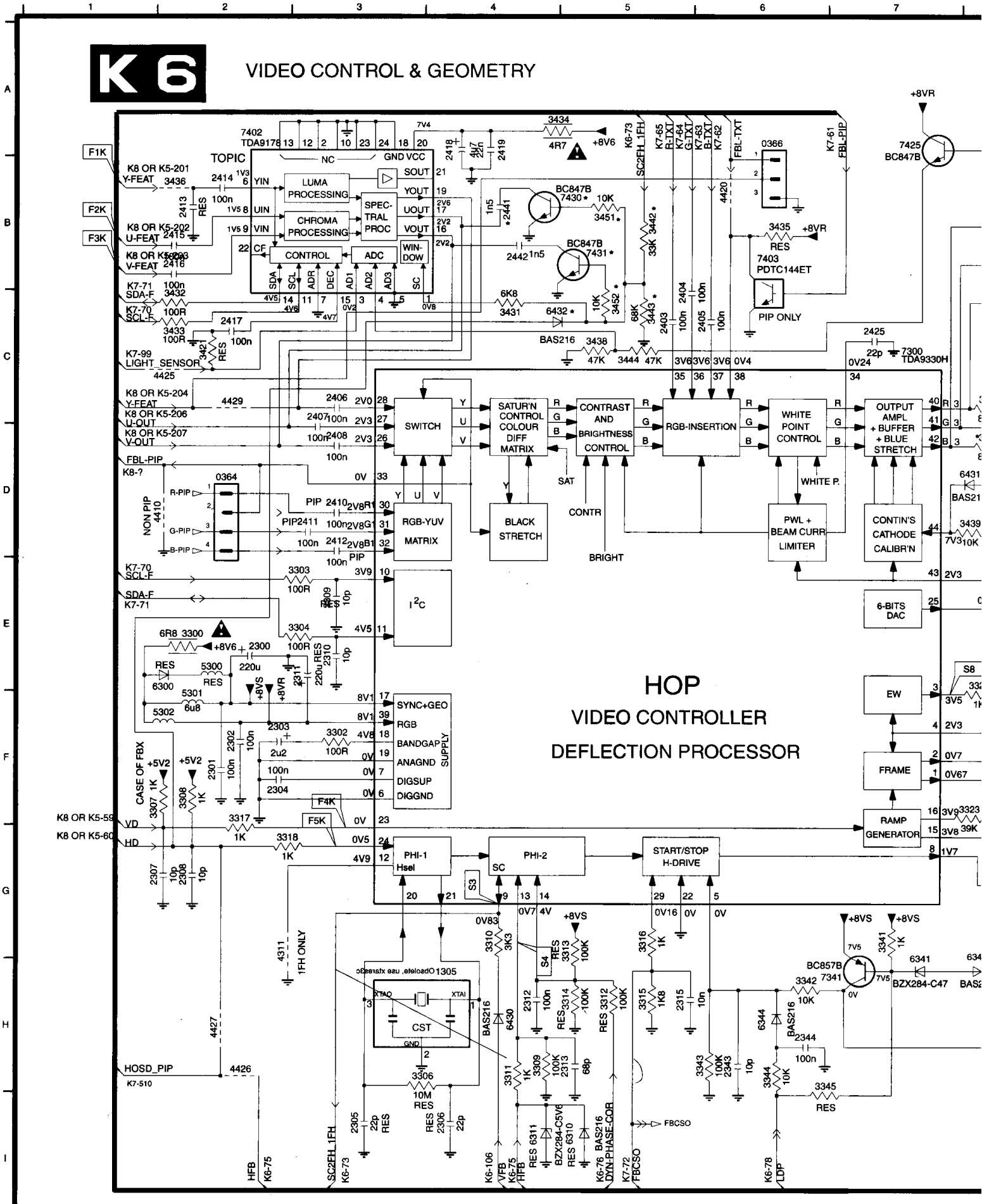
5-C G2	3057-C H2	3069 K13	3077 K8	3260 J4	4005 D3	4018 F14	6006 G7	6023 G8	7002 B15	7010 H7	7018 K9
5-D G2	3057-D H2	3070 K16	3078 K8	3261 J3	4008 F3	4802 J3	6008 G4	6025 G9	7003 B11	7011 I8	7019 D5
6-A G2	3059 C6	3071 K18	3080-A I13	3262 K3	4009 D3	5001 K6	6009 G4	6026 G9	7004 J6	7012 D6	7205 K4
6-B G2	3062 K18	3072 L17	3080-B I13	3263 K4	4010 C6	5002 I5	6012 B5	6037 D6	7005 J7	7013 B17	7216 J3
6-C H2	3063 F17	3073 K16	3080-C J13	3895 J3	4012 D3	6001 G6	6013 C9	6038 I4	7006 K16	7014 K18	
6-D H2	3066 D5	3074 K3	3080-D I13	4001 H3	4014 D3	6002 G5	6017 G6	6238 J4	7007 K17	7015 K18	
7-A H2	3067 D5	3075 G9	3081 I13	4002 H3	4015 D4	6003 G7	6019 G6	6250 J4	7008 H9	7016 K16	
7-B H2	3068 E5	3076 H10	3259 J4	4003 I4	4017 E14	6004 G5	6021 G7	7001 F15	7009 J16	7017 K8	

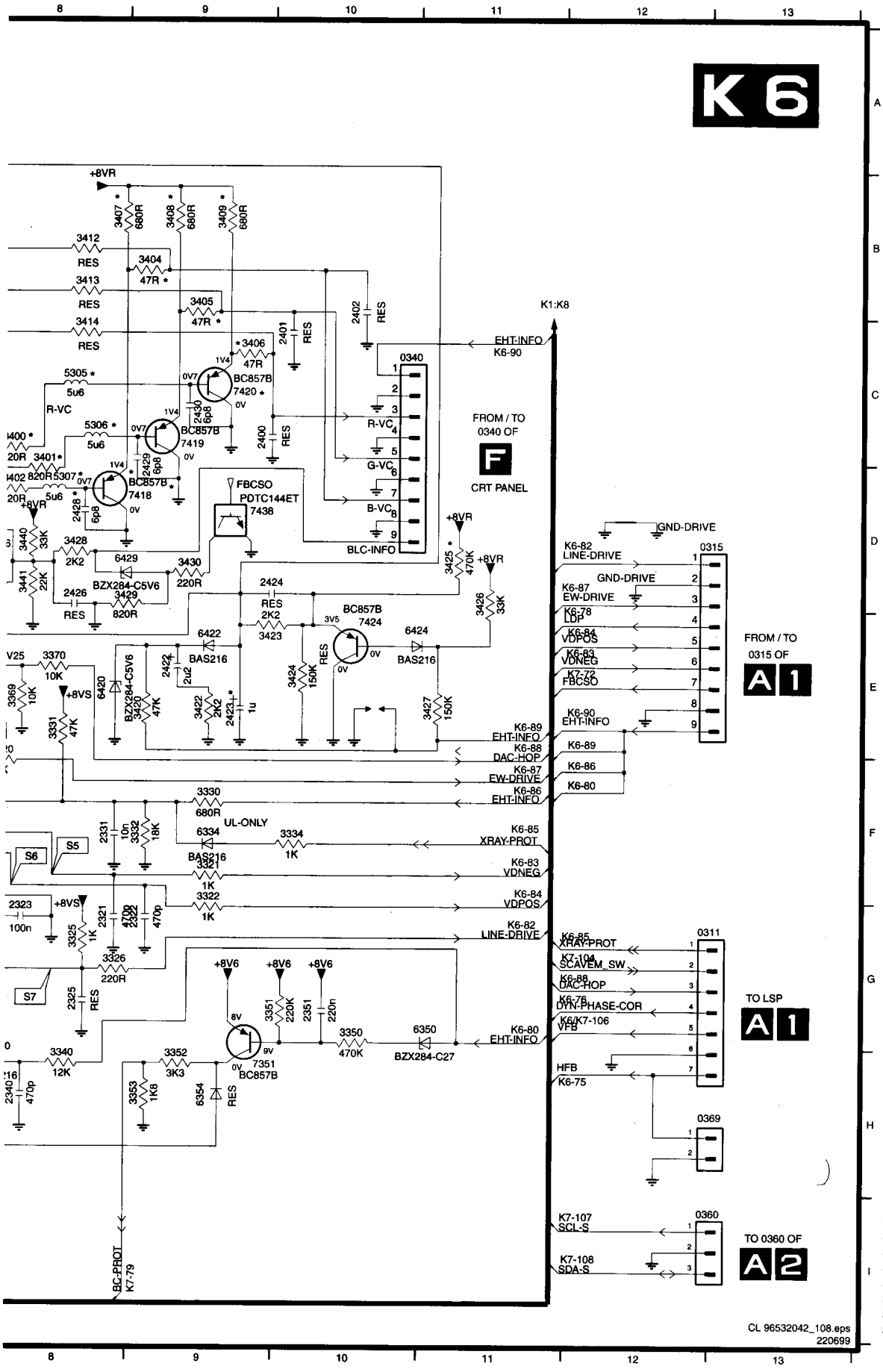
OTC						
Pin nr.	Pin name	MG1.1E	MG2.1E	MG3.1E	MG3.1A	MG3.1U
93	P1-0/T0				MAINS CLOCK	MAINS CLOCK
98	P1-5/INT2			MCS/MPEG		IRQ-digital;
108	P2-5/ADC3			STAUS 4	AGC	
109	P2-6/ADC4	STATUS 3	STATUS 3	STATUS 3	16:9 AR front	16:9 AR front
110	P2-7/ADC5			RGB1fh/frontUI		
115	P3-2			LNA	LNA	
118	P3-5/TTD			AUX SUPPLY	AUX SUPPLY	AUX SUPPLY

K 7



Small signal panel





	0311 G12	3331 E8	7402 A2
	0315 D12	3332 F9	7403 B6
	0340 C10	3334 F10	7418 D8
	0360 I12	3340 H8	7419 C9
	0364 D2	3341 G7	7420 C9
A	0366 A6	3342 H6	7424 E10
	0369 H12	3343 H6	7425 A7
	1305 H4	3344 H6	7430 B5
	2300 E2	3345 H6	7431 B5
	2301 F2	3350 G10	7438 D9
	2302 F2	3351 G10	
	2303 F2	3352 H9	
	2304 F2	3353 H9	
	2305 I3	3369 E8	
	2306 I4	3370 E8	
B	2307 G2	3400 C8	
	2308 G2	3401 C8	
	2309 E3	3402 D8	
	2310 E3	3404 B9	
	2311 E3	3405 B9	
	2312 H4	3406 C9	
	2313 H5	3407 B8	
	2315 H5	3408 B9	
	2321 G8	3409 B9	
C	2322 G9	3412 B8	
	2323 G8	3413 B8	
	2325 G8	3414 C8	
	2331 F8	3420 E9	
	2340 H8	3421 C2	
	2343 H6	3422 E9	
	2344 H6	3423 E9	
	2351 G10	3424 E10	
	2400 C9	3425 D11	
D	2401 C10	3426 D11	
	2402 B10	3427 E11	
	2403 C5	3428 D8	
	2404 C5	3429 D8	
	2405 C6	3430 D9	
	2406 C3	3431 C4	
	2407 C3	3432 C2	
	2408 D3	3433 C2	
	2410 D3	3434 A4	
	2411 D3	3435 B6	
E	2412 D3	3436 B2	
	2413 B2	3438 C5	
	2414 B2	3439 D8	
	2415 B2	3440 D8	
	2416 B2	3441 D8	
	2417 C2	3442 B5	
	2418 A4	3443 C5	
	2419 A4	3444 C5	
	2422 E9	3451 B5	
F	2423 E9	3452 C5	
	2424 D9	4311 G2	
	2425 C7	4410 D2	
	2426 D8	4420 B6	
	2428 D8	4425 C2	
	2429 C8	4426 H2	
	2430 C9	4427 H2	
	2441 B4	4429 C2	
	2442 B4	5300 E2	
	3300 E2	5301 F2	
G	3302 F3	5302 F2	
	3303 E3	5305 C8	
	3304 E3	5306 C8	
	3306 H3	5307 D8	
	3307 F2	6300 E2	
	3308 F2	6310 I5	
	3309 H4	6311 I4	
	3310 G4	6334 F9	
	3311 H4	6340 H8	
H	3312 H5	6341 H7	
	3313 G5	6344 H6	
	3314 H5	6350 G11	
	3315 H5	6354 H9	
	3316 G5	6420 E8	
	3317 F2	6422 E9	
	3318 G2	6424 E10	
	3320 E8	6429 D8	
	3321 F9	6430 H4	
I	3322 F9	6431 D8	
	3323 F8	6432 C4	
	3325 G8	7300 C7	
	3326 G8	7341 H7	
	3330 F9	7351 H10	

Small signal panel

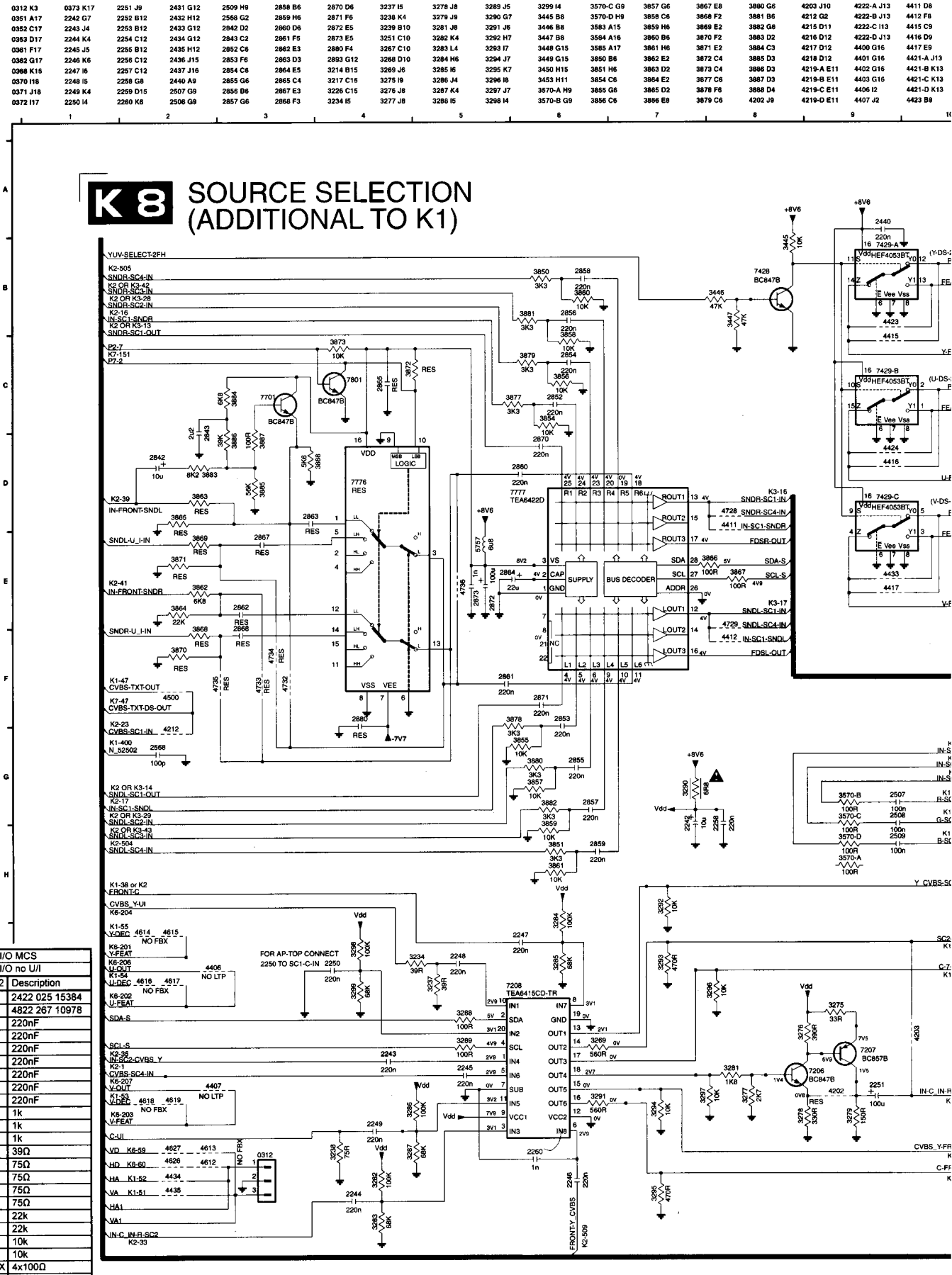


Diagram	1		I/O MCS
K8	2		I/O no U/I
Item	1	2	Description
0372			2422 025 15384
0373	X		4822 267 10978
2252			220nF
2253			220nF
2254			220nF
2255			220nF
2256			220nF
2257			220nF
2259			220nF
3214			1k
3217			1k
3226			1k
3234			39Ω
3239			75Ω
3251			75Ω
3267			75Ω
3268			75Ω
3870			22k
3871			22k
3872			10k
3873			10k
4219	X	X	4x100Ω
7209			TDA8601T/C1
7776			HEF4052BT
7801			BC847B

4424 D9	4613 K2	4729 E8	7209 A12	7777 D5
4430 C17	4614 I2	4732 F3	7426 F12	7801 C4
4431 C18	4615 I2	4733 F3	7427 I16	
4432 C18	4616 I2	4734 F3	7428 B8	
4433 E9	4617 I2	4735 F2	7429-A B9	
4434 K2	4618 J2	4736 E5	7429-B C9	
4435 K2	4619 J2	5757 E5	7429-C D9	
4436 F17	4626 K2	7206 J9	7575 A16	
4500 F2	4627 K2	7207 J9	7701 C3	
4612 K2	4728 D8	7208 I5	7776 D4	

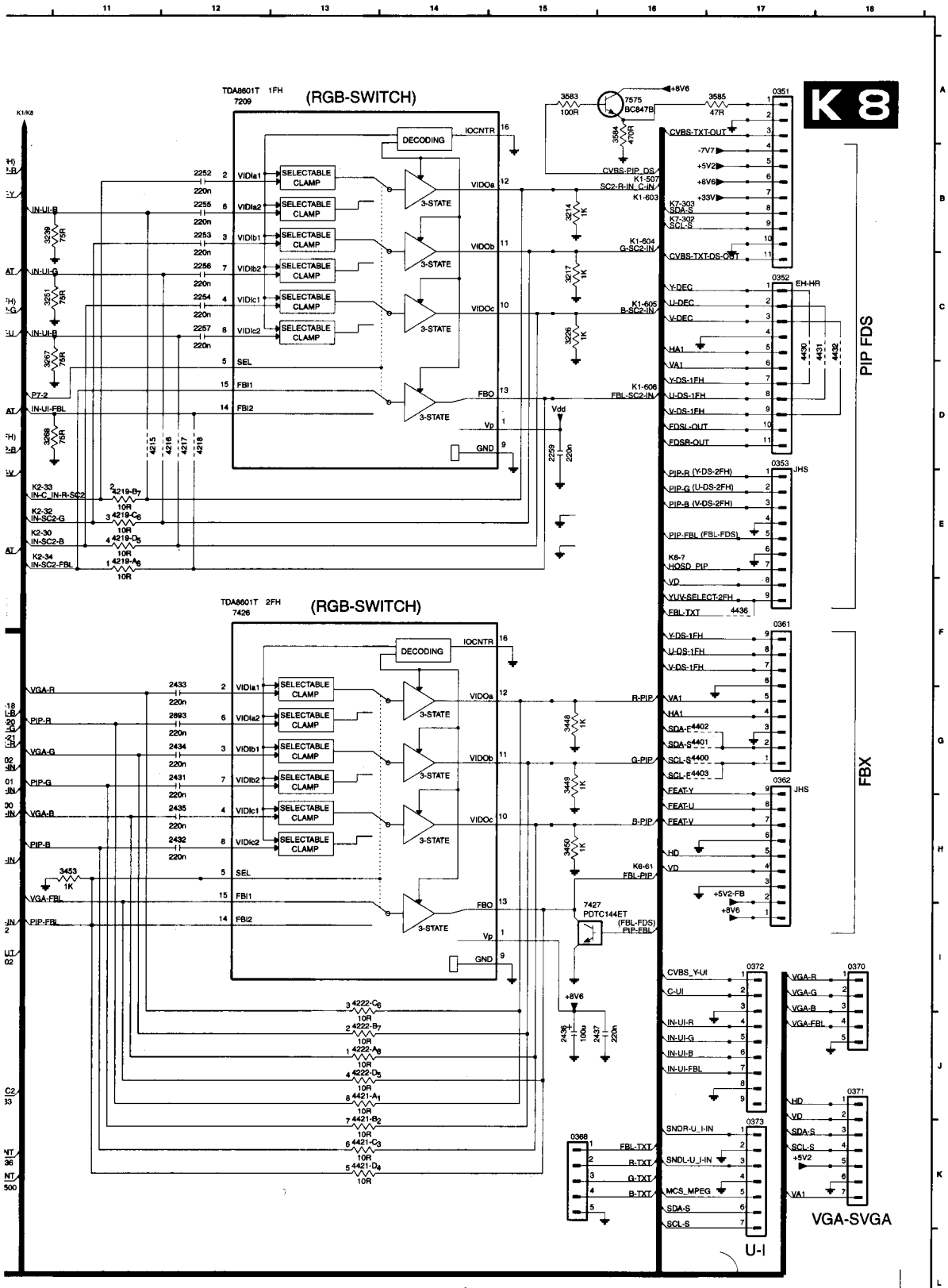


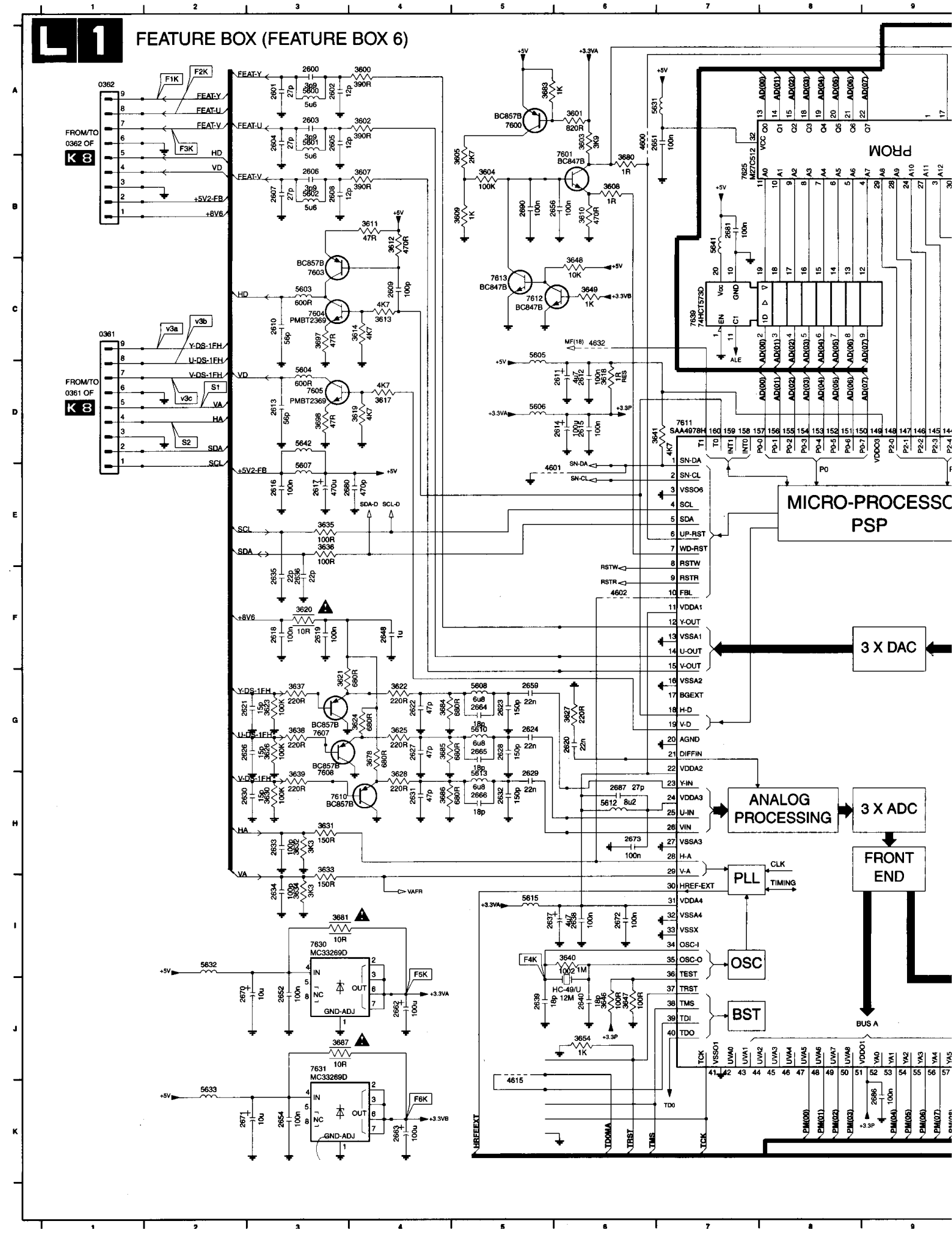
Diagram K8	1	No FDS
	2	FDS

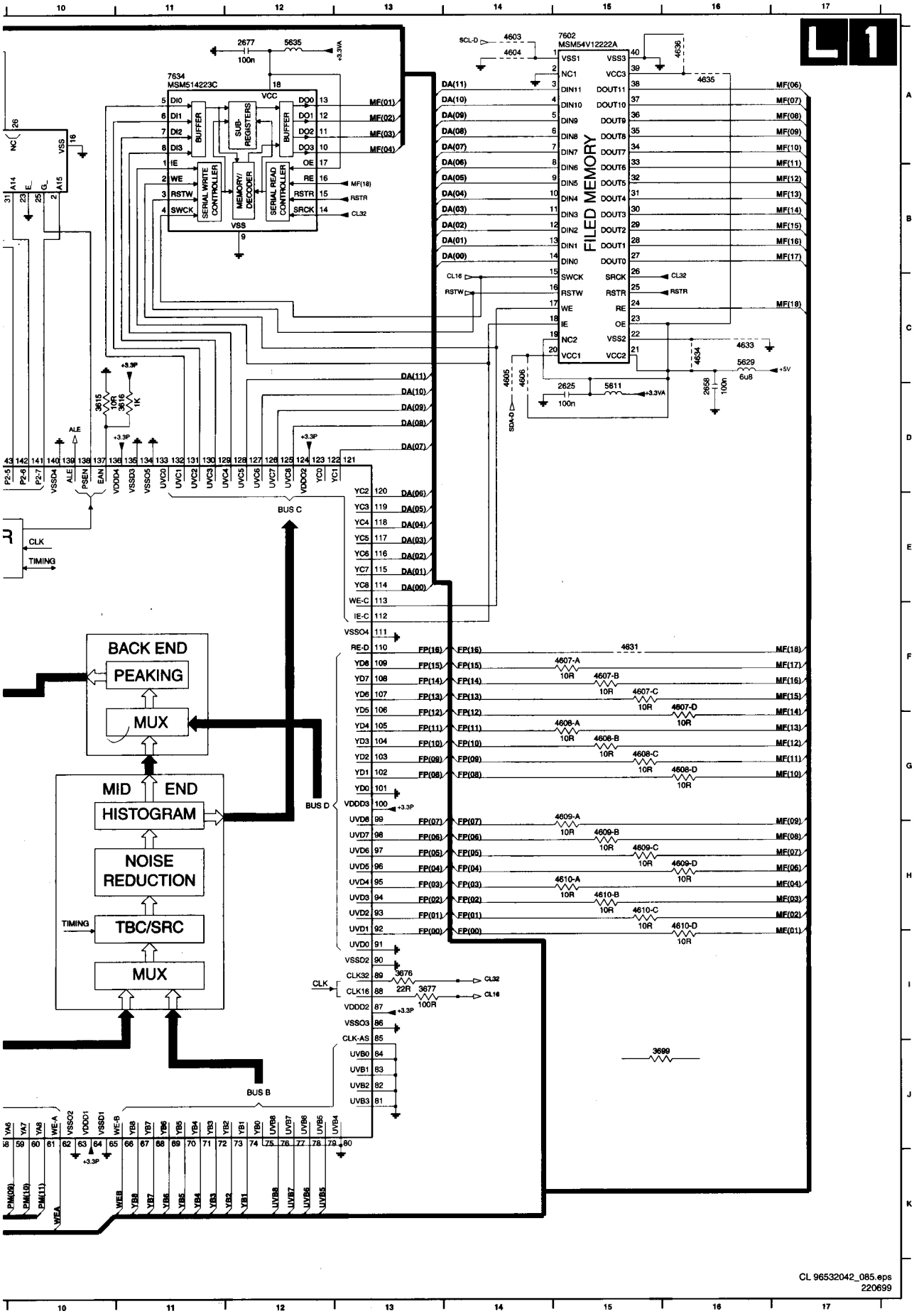
Item	1	2	Description
0351		X	2422 025 15385
0352		X	4822 267 10962
0353		X	2422 025 15384
0370			2422 025 15382
0371			2422 025 15383
2431			100nF
2432			100nF
2433			100nF
2434			100nF
2435			100nF
2437			100nF
2440			100nF
2893			100nF
3445			10k
3446			47k
3447			47k
3448			1k
3449			1k
3450			1k
3453			1k
3583		X	100Ω
3584		X	470Ω
3585		X	47Ω
4222			4x10Ω
4421		X	4x10Ω
4423	X	X	Jumper 0805
4424	X	X	Jumper 0805
4430	X		Jumper 0805
4431	X		Jumper 0805
4432	X		Jumper 0805
4433	X	X	Jumper 0805
4436		X	Jumper 0603
4500	X	X	Jumper 0805
7426			TDA8601T/C1
7427			PDTC144ET
7428			BC847B
7429			HEF4053BT
7575		X	BC847B

Diagram K8	1	No audio matrix
	2	Audio matrix

Item	1	2	Description
2842		X	10µF
2843		X	2,2µF
2852		X	220nF
2853		X	220nF
2854		X	220nF
2855		X	220nF
2856		X	220nF
2857		X	220nF
2858		X	220nF
2859		X	220nF
2860		X	220nF
2861		X	220nF
2864		X	22µF
2870		X	220nF
2871		X	220nF
2872		X	100µF
2873		X	1nF
3850		X	3k3
3851		X	3k3
3854		X	10k
3855		X	10k
3856		X	10k
3857		X	10k
3858		X	10k
3859		X	10k
3860		X	10k
3861		X	10k
3862		X	6k8
3864		X	22k
3866		X	100Ω
3867		X	100Ω
3877		X	3k3
3878		X	3k3
3879		X	3k3
3880		X	3k3
3881		X	3k3
3882		X	3k3
3883		X	8k2
3884		X	6k8
3885		X	56k
3886		X	39k
3887		X	100Ω
3888		X	5k6
4411	X		Jumper 0805
4412	X		Jumper 0805
4728	X		Jumper 0805
4729	X		Jumper 0805
4732		X	Jumper 0805
4736		X	Jumper 0805
5757	X	X	6,8µH
7701		X	BC847B
7777		X	TEA6422D

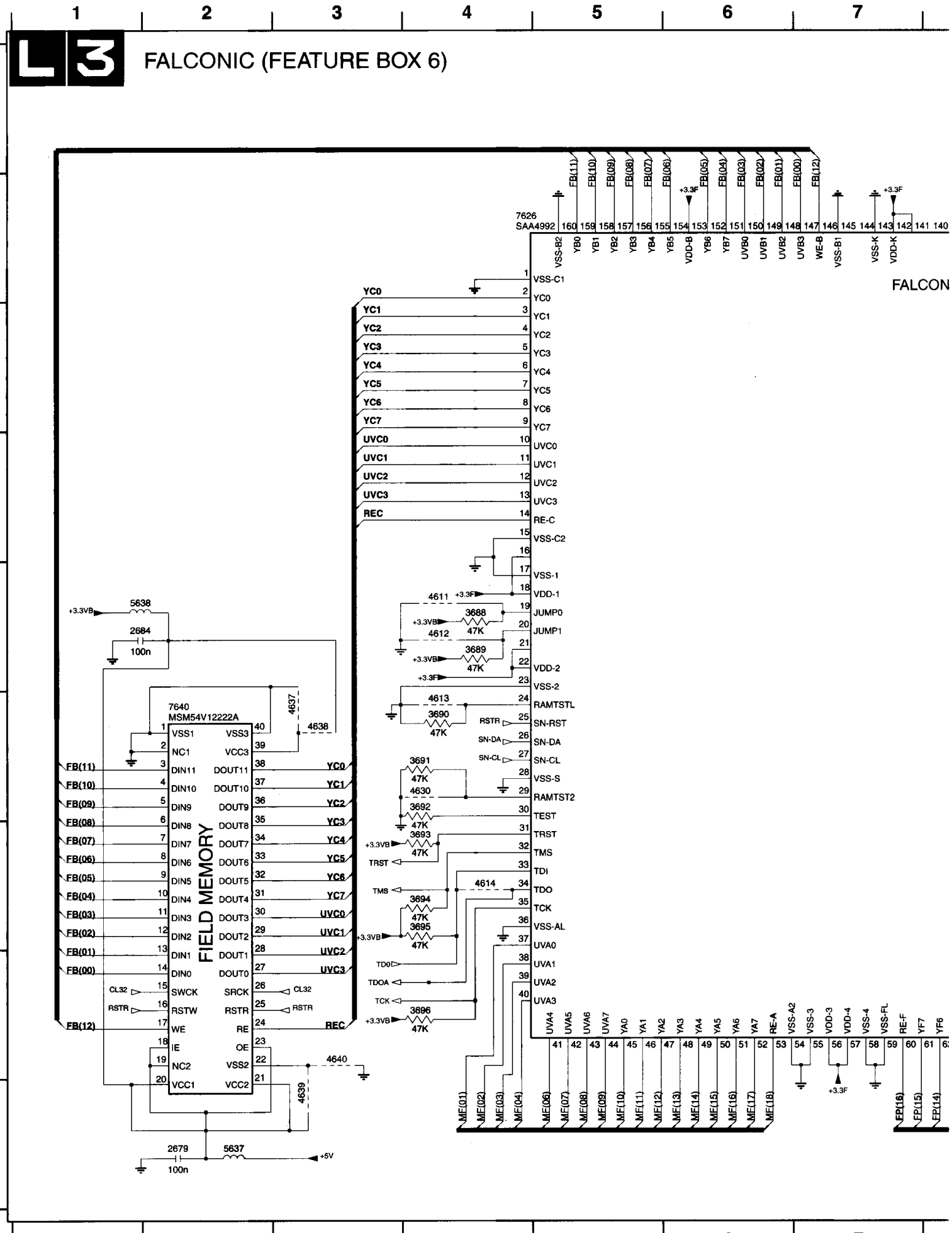
Featurebox


L1
FEATURE BOX (FEATURE BOX 6)
FROM/TO 0362 OF K8
FROM/TO 0361 OF K8
MICRO-PROCESSC PSP
PROM
3 X DAC
ANALOG PROCESSING
3 X ADC
FRONT END
PLL
OSC
BST
BUS A
CLK
TIMING
HC-49/U 12M
MC33269D
GND-ADJ
SAA4978H
74HCT573D
PMBT2369
BC857B
BC847B



	0361 C1	3654 J6
	0362 A1	3676 I13
	1002 I6	3677 I13
	2600 A3	3678 G4
	2601 A3	3680 B6
	2602 A3	3681 I3
	2603 A3	3683 A5
A	2604 A3	3684 G4
	2605 A3	3685 G4
	2606 B3	3686 H4
	2607 B3	3687 J3
	2608 B3	3697 C3
	2609 C4	3698 D3
	2610 C3	3699 J15
	2611 D6	4600 A6
	2612 D6	4601 E5
	2613 D3	4602 F6
	2614 D6	4603 A14
B	2615 D6	4604 A14
	2616 E3	4605 C14
	2617 E3	4606 C14
	2618 F3	4607-A F15
	2619 F3	4607-B F15
	2620 G6	4607-C F15
	2621 G3	4607-D F16
	2622 G4	4608-A G15
	2623 G5	4608-B G15
C	2624 G5	4608-C G15
	2625 D15	4608-D G16
	2626 G3	4609-A G15
	2627 G4	4609-B H15
	2628 G5	4609-C H15
	2629 H5	4609-D H16
	2630 H3	4610-A H15
	2631 H4	4610-B H15
	2632 H5	4610-C H15
D	2633 H3	4610-D H16
	2634 I3	4615 J5
	2635 F3	4631 F15
	2636 F3	4632 C6
	2637 I5	4633 C16
	2638 I6	4634 C16
	2639 J5	4635 A16
	2640 J6	4636 A16
	2648 F4	5600 A3
	2651 A7	5601 A3
E	2652 J3	5602 B3
	2654 K3	5603 C3
	2656 B6	5604 D3
	2658 D16	5605 C5
	2659 G5	5606 D5
	2662 J4	5607 E3
	2663 K4	5608 G5
	2664 G5	5610 G5
	2665 G5	5611 D15
F	2666 H5	5612 H6
	2670 J2	5613 H5
	2671 K2	5615 I5
	2672 I6	5629 C16
	2673 H6	5631 A7
	2677 A12	5632 I2
	2680 E4	5633 K2
	2681 B7	5635 A12
	2686 K9	5641 B7
G	2687 H6	5642 D3
	2690 B5	7600 A5
	3600 A4	7601 B6
	3601 A6	7602 A15
	3602 A4	7603 C3
	3603 A6	7604 C3
	3604 B5	7605 D3
	3605 B5	7607 G3
	3607 B4	7606 G3
	3608 B6	7610 H3
H	3609 B5	7611 D7
	3610 B6	7612 C5
	3611 B4	7613 C5
	3612 B4	7625 B7
	3613 C4	7630 I3
	3614 C4	7631 J3
	3615 D10	7634 A11
	3616 D11	7639 C7
	3617 D4	
I	3618 D6	
	3619 D4	
	3620 F3	
	3621 G3	
	3622 G4	
	3623 G3	
	3624 G4	
	3625 G4	
	3626 G3	
J	3627 G6	
	3628 H4	
	3630 H3	
	3631 H3	
	3632 H3	
	3633 H3	
	3634 I3	
	3635 E3	
	3636 E3	
	3637 G3	
K	3638 G3	
	3639 H3	
	3640 I6	
	3641 D7	
	3646 J6	
	3647 J6	
	3648 C6	
	3649 C6	

Featurebox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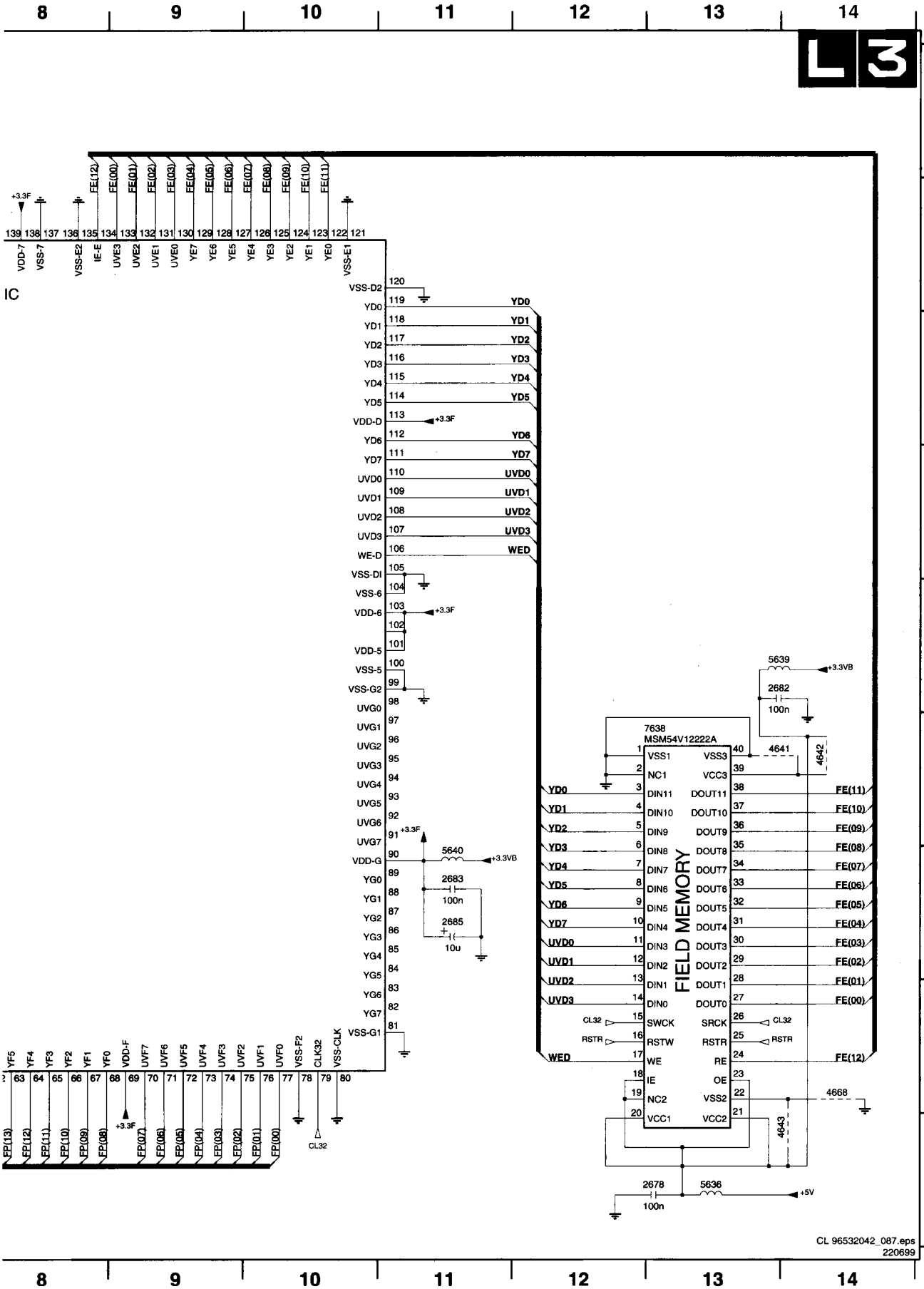
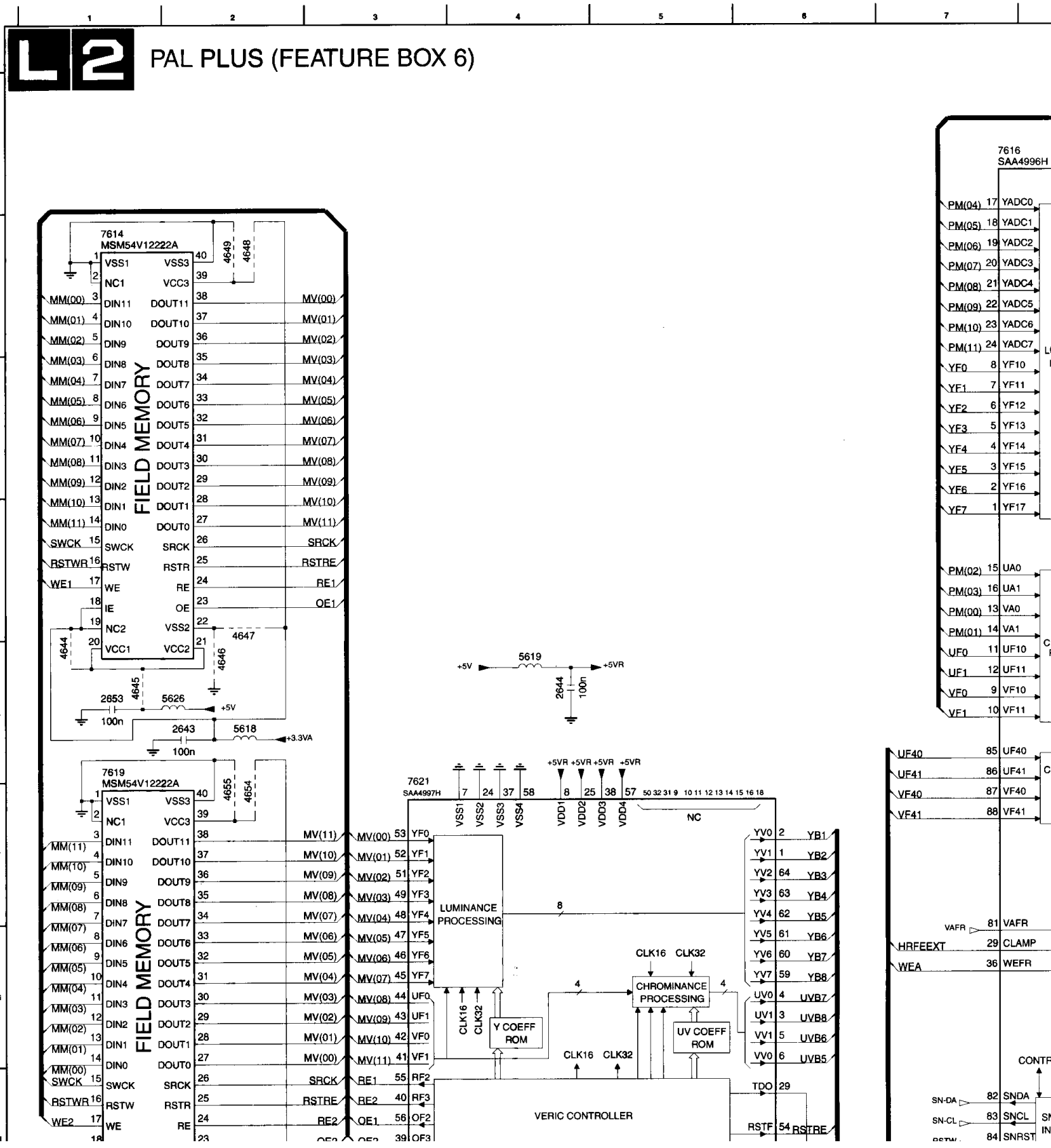
FALCONIC (FEATURE BOX 6)
7626
SAA4992
FALCON
7640
MSM54V12222A
FIELD MEMORY
5638
2684
100n
2679
5637
+5V
+3.3VB
+3.3F
4611
4612
4613
4614
4630
4637
4638
4639
4640
3688
3689
3690
3691
3692
3693
3694
3695
3696
47K
RSTR
SN-RST
SN-DA
SN-CL
TRST
TMS
TDO
TDOA
TCK
CL32
VSS1
NC1
DIN11
DIN10
DIN9
DIN8
DIN7
DIN6
DIN5
DIN4
DIN3
DIN2
DIN1
DIN0
SWCK
RSTW
WE
IE
NC2
VCC1
VSS3
VCC3
DOUT11
DOUT10
DOUT9
DOUT8
DOUT7
DOUT6
DOUT5
DOUT4
DOUT3
DOUT2
DOUT1
DOUT0
SRCK
RSTR
RE
OE
VSS2
VCC2
VSS-C1
YC0
YC1
YC2
YC3
YC4
YC5
YC6
YC7
UVC0
UVC1
UVC2
UVC3
REC
RE-C
VSS-C2
VSS-1
VDD-1
JUMP0
JUMP1
VDD-2
VSS-2
RAMTSTL
SN-RST
SN-DA
SN-CL
VSS-S
RAMTST2
TEST
TRST
TMS
TDI
TDO
TCK
VSS-AL
UVA0
UVA1
UVA2
UVA3
UVA4
UVA5
UVA6
UVA7
YA0
YA1
YA2
YA3
YA4
YA5
YA6
YA7
RE-A
VSS-A2
VSS-3
VDD-3
VDD-4
VSS-4
VSS-FL
RE-F
YF7
YF6
FB(11)
FB(10)
FB(09)
FB(08)
FB(07)
FB(06)
FB(05)
FB(04)
FB(03)
FB(02)
FB(01)
FB(00)
FB(12)
YB0
YB1
YB2
YB3
YB4
YB5
VDD-B
YB6
YB7
UVB0
UVB1
UVB2
UVB3
WE-B
VSS-B1
VSS-K
VDD-K
ME(01)
ME(02)
ME(03)
ME(04)
ME(06)
ME(07)
ME(08)
ME(09)
ME(10)
ME(11)
ME(12)
ME(13)
ME(14)
ME(15)
ME(16)
ME(17)
ME(18)
FP(16)
FP(15)
FP(14)

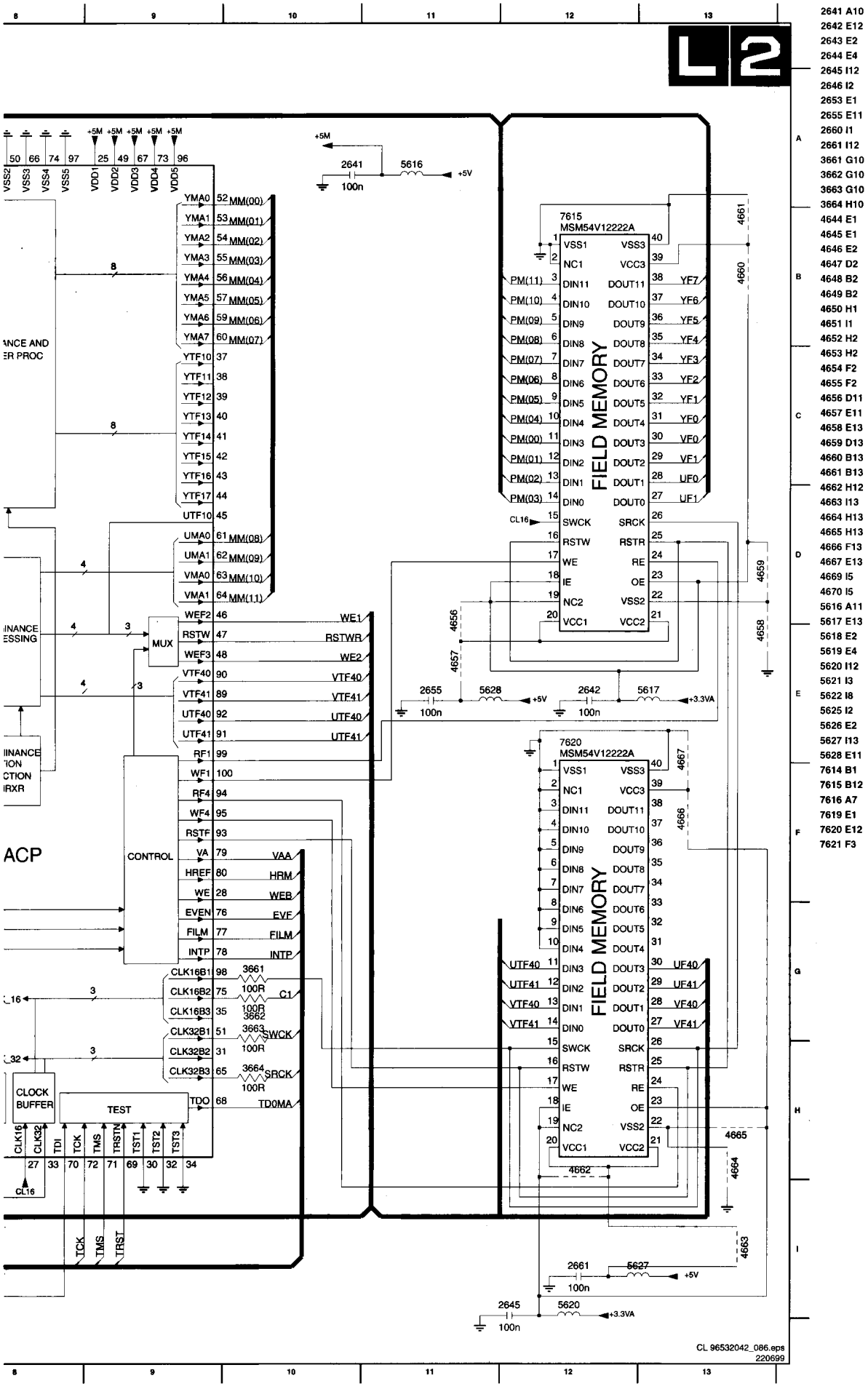


2678 I13
2679 I2
2682 E13
2683 G11
2684 E1
2685 G11
3688 E4
3689 E4
3690 F4
3691 F4
3692 F4
3693 G4
3694 G4
3695 G4
3696 H4
4611 E4
4612 E4
4613 F4
4614 G4
4630 F4
4637 F3
4638 F3
4639 I3
4640 H3
4641 F13
4642 F14
4643 I14
4668 H14
5636 I13
5637 I2
5638 E1
5639 E13
5640 G11
7626 B4
7638 F12
7640 F2

Featurebox

L2 PAL PLUS (FEATURE BOX 6)

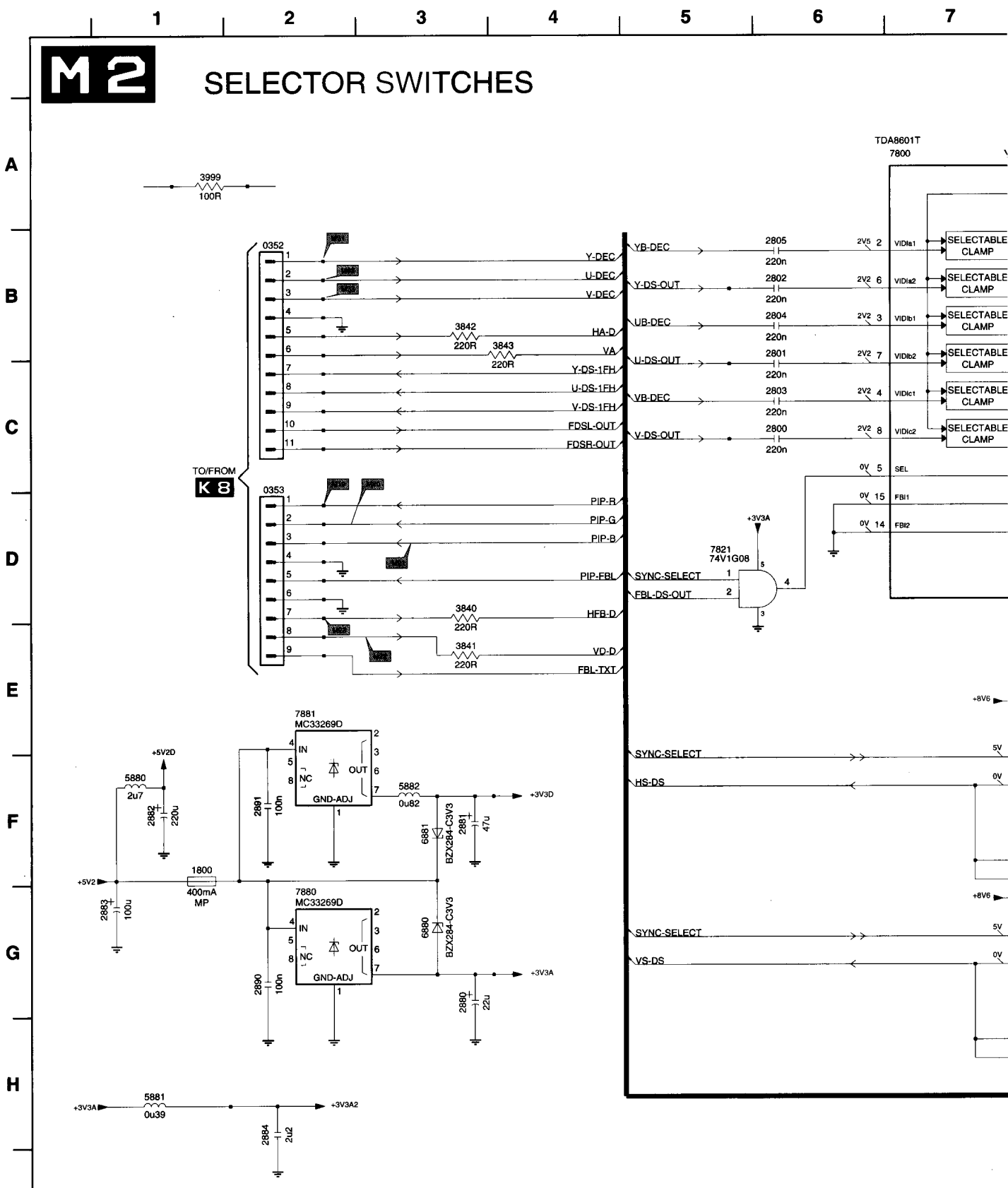




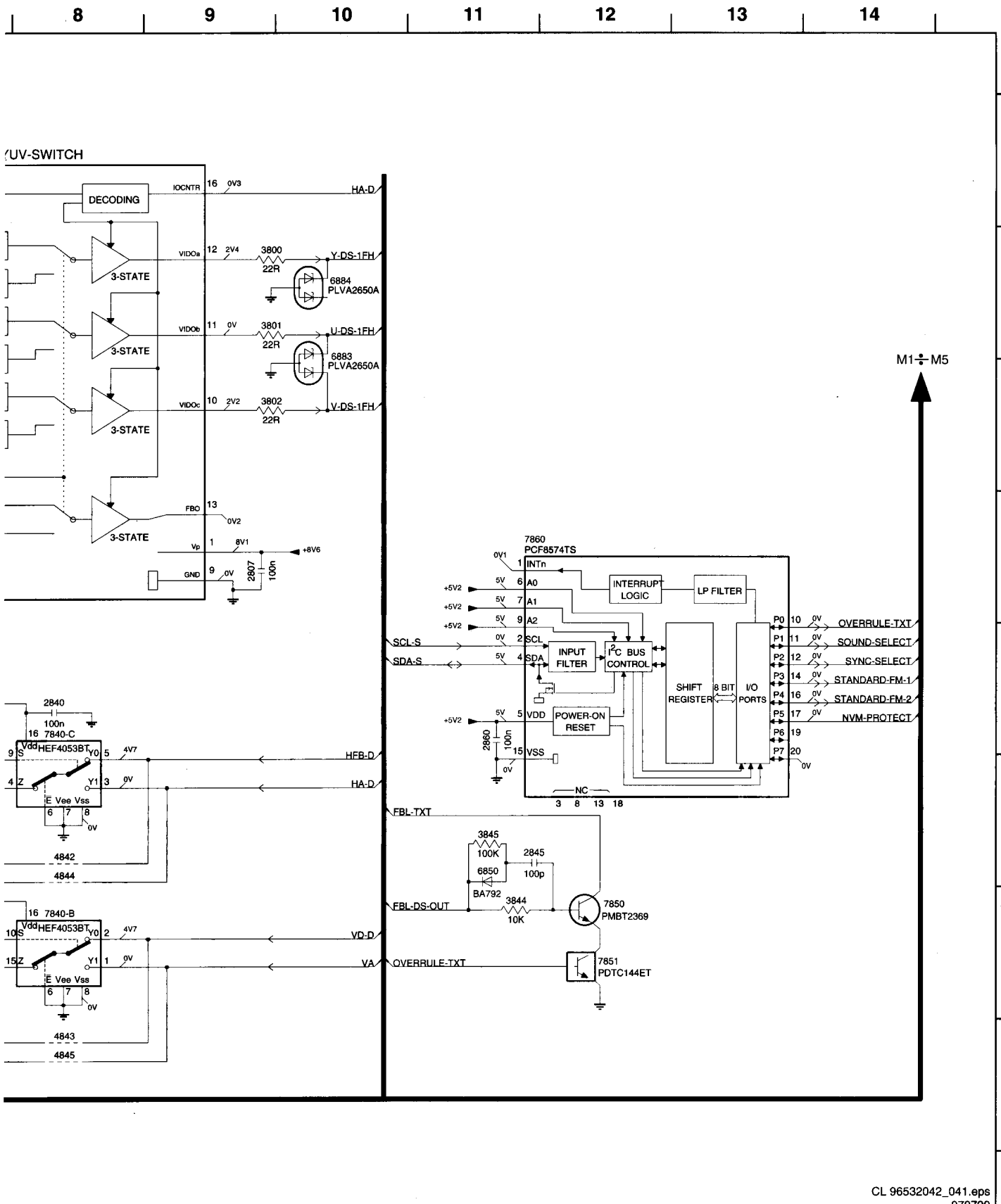
2641 A10
2642 E12
2643 E2
2644 E4
2645 I12
2646 I2
2653 E1
2655 E11
2660 I1
2661 I12
3661 G10
3662 G10
3663 G10
3664 H10
4644 E1
4645 E1
4646 E2
4647 D2
4648 B2
4649 B2
4650 H1
4651 I1
4652 H2
4653 H2
4654 F2
4655 F2
4656 D11
4657 E11
4658 E13
4659 D13
4660 B13
4661 B13
4662 H12
4663 I13
4664 H13
4665 H13
4666 F13
4667 E13
4669 I5
4670 I5
5616 A11
5617 E13
5618 E2
5619 E4
5620 I12
5621 I3
5622 I8
5625 I2
5626 E2
5627 I13
5628 E11
7614 B1
7615 B12
7616 A7
7619 E1
7620 E12
7621 F3

Full dualscreen / PIP module

0352 B2	2800 C6	2803 C6	2807 D9	2860 E11	2882 F1	2890 G2	3801 B9	3841 E3	3844 G11	4842 F8	4845 H8	5882 F3	6881 F3
0353 D2	2801 B6	2804 B6	2840 E8	2880 G3	2883 G1	2891 F2	3802 C9	3842 B3	3845 F11	4843 H8	5880 F1	6850 F11	6883 C10
1800 F1	2802 B6	2805 B6	2845 F11	2881 F3	2884 H2	3800 B9	3840 D3	3843 B4	3999 A1	4844 F8	5881 H1	6880 G3	6884 B10



7800 A7 7840-C E8 7860 D11
7821 D5 7850 G12 7880 G2
7840-B G8 7851 G12 7881 E2



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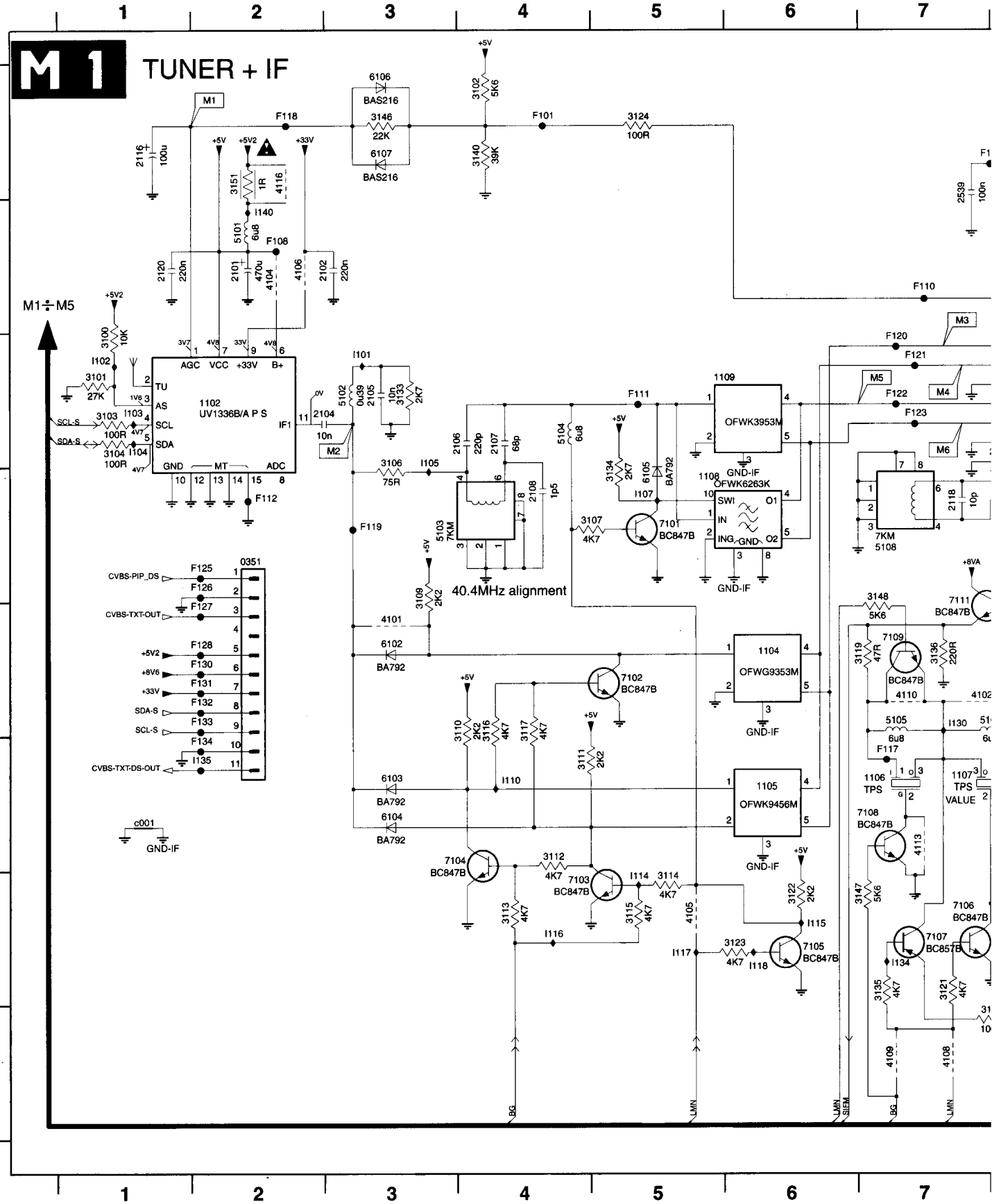
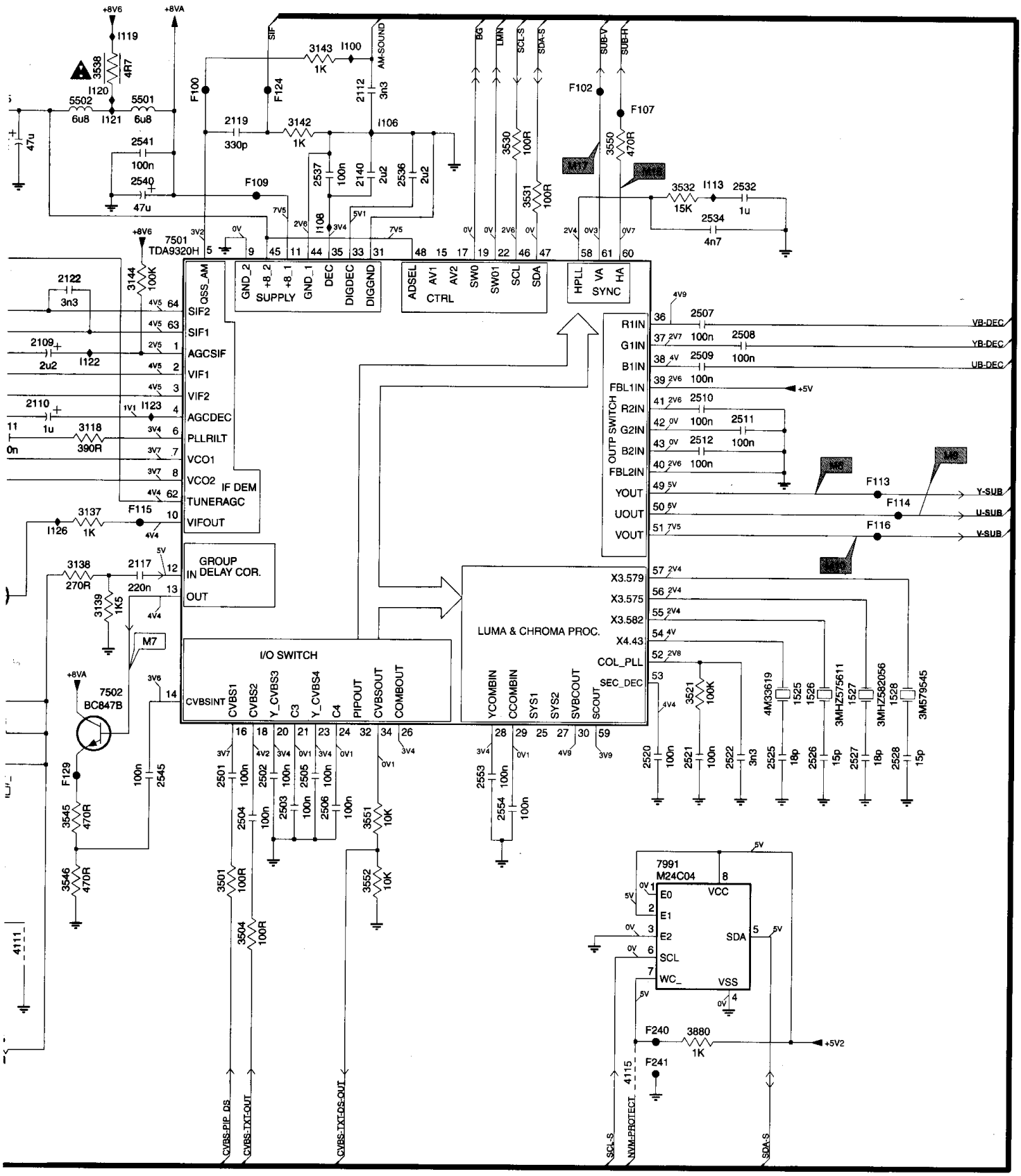
070799

Full dualscreen / PIP module

0351 D2 1109 C5 2104 C2 2111 C8 2122 B8 2506 F10 2520 F12 2532 B13 2541 A8 3103 C1 3112 F4 3119 E7 3135 G7 3143 A10 3501 F9 3545 F8 4102 E7 411
1102 C2 1525 E13 2105 C3 2112 A10 2140 B10 2507 C12 2521 F12 2534 B12 2545 F9 3104 C1 3113 G4 3121 G7 3136 E7 3144 B8 3504 G9 3546 F8 4104 B2 411
1104 E6 1526 E13 2106 C4 2116 A1 2501 F9 2508 C13 2522 F13 2536 B10 2553 F11 3106 C3 3114 G5 3122 G6 3137 D8 3145 H8 3521 E12 3550 A12 4105 G5 411
1105 F6 1527 E13 2107 C4 2117 D8 2502 F9 2509 C12 2525 F13 2537 B10 2554 F11 3107 D5 3115 G5 3123 G6 3138 D8 3146 A3 3530 A11 3551 F10 4106 B2 411
1106 F7 1528 E14 2108 D4 2118 D7 2503 F10 2510 C12 2526 F13 2538 A8 3100 C1 3109 D3 3116 E4 3124 A5 3139 E8 3147 G7 3531 B11 3552 F10 4108 H7 510
1107 F7 2101 B2 2109 C8 2119 A9 2504 F9 2511 C13 2527 F13 2539 A7 3101 C1 3110 E4 3117 E4 3133 C3 3140 A4 3148 D7 3532 B12 3880 G12 4109 H7 510
1108 D5 2102 B3 2110 C8 2120 B1 2505 F10 2512 C12 2528 F14 2540 B8 3102 A4 3111 F4 3118 C8 3134 D5 3142 A10 3151 A2 3538 A8 4101 E3 4110 E7 510



H12	5106 E7	6105 D5	7105 G6	7502 E8
A2	5108 D7	6106 A3	7106 G7	7991 F12
B2	5501 A8	6107 A3	7107 G7	c001 F1
C3	5502 A8	7101 D5	7108 F6	
D3	6102 E3	7102 E5	7109 E7	



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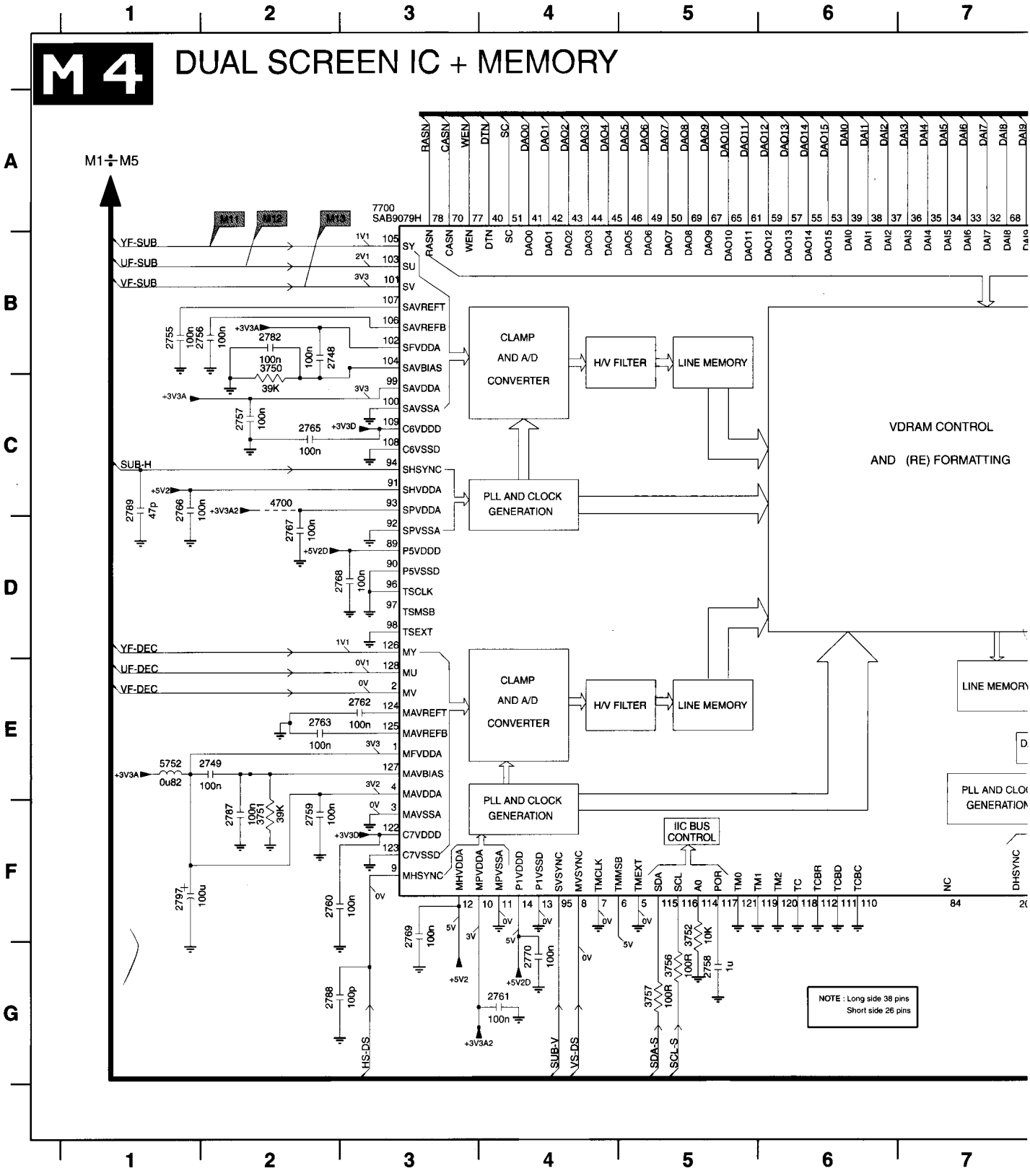
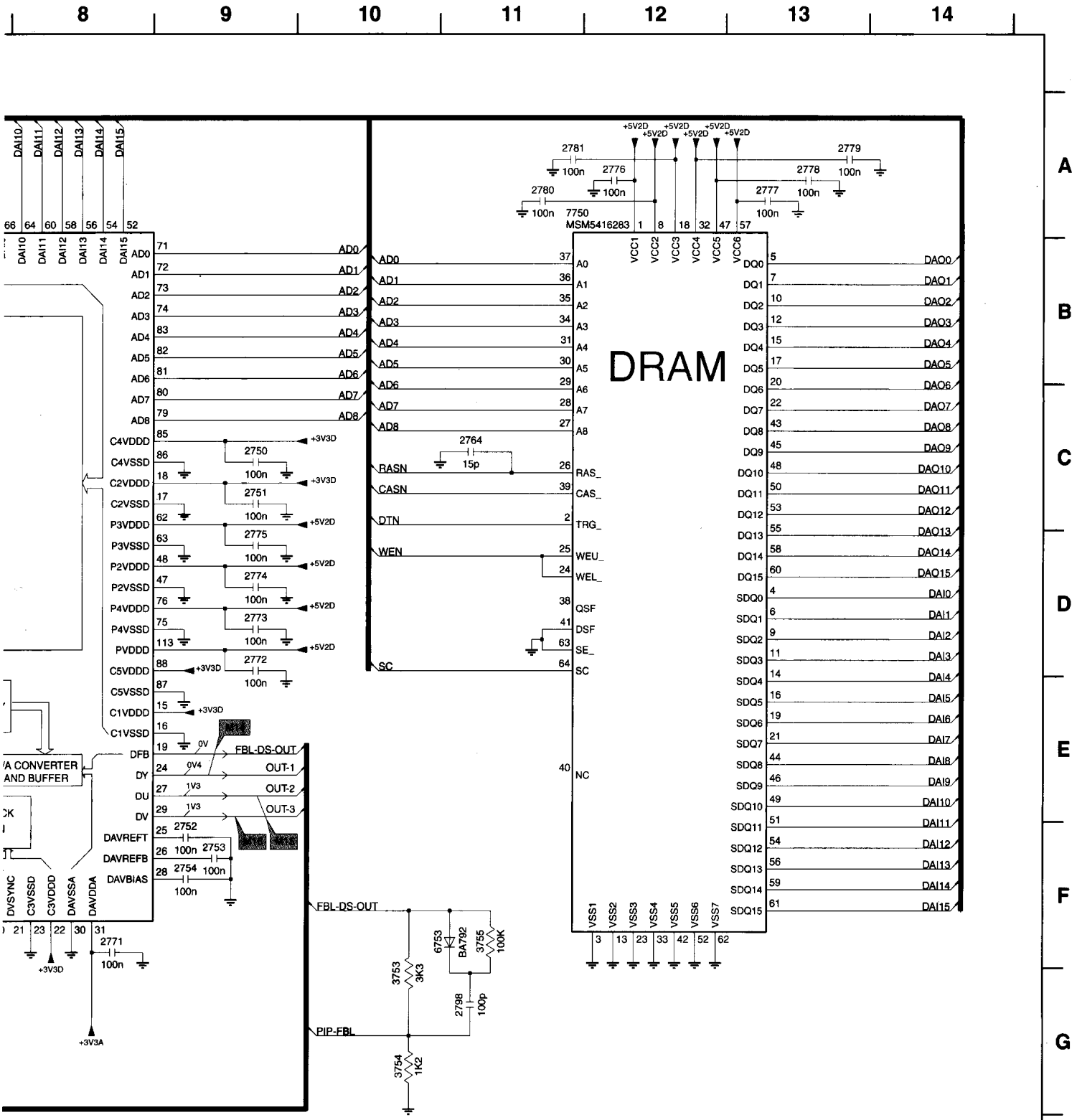
Full dualscreen / PIP module

2748 B2 2750 C9 2752 F9 2754 F9 2756 B2 2758 G5 2760 F2 2762 E3 2764 C11 2766 C1 2768 D3 2770 G4 2772 D9 2774 D9 2776 A12 2778 A13 2780 A1
2749 E2 2751 C9 2753 F9 2755 B1 2757 C2 2759 F2 2761 G4 2763 E2 2765 C2 2767 D2 2769 F3 2771 F8 2773 D9 2775 D9 2777 A13 2779 A13 2781 A1



1 2782 B2 2788 G2 2797 F1 3750 B2 3752 F5 3754 G10 3756 G5 4700 C2 6753 F11 7750 A11
1 2787 F2 2789 C1 2798 G11 3751 F2 3753 G10 3755 F11 3757 G5 5752 E1 7700 A3



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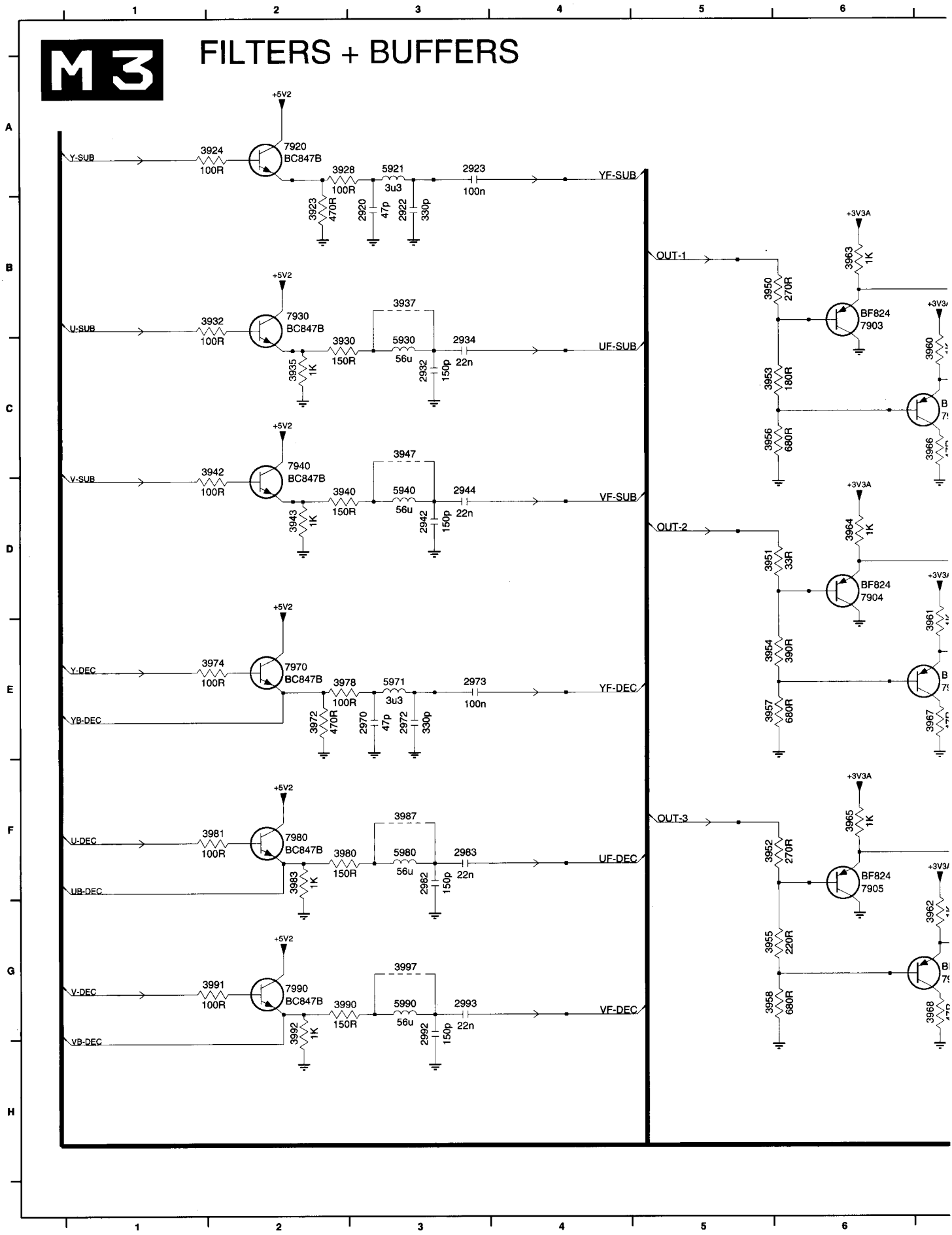
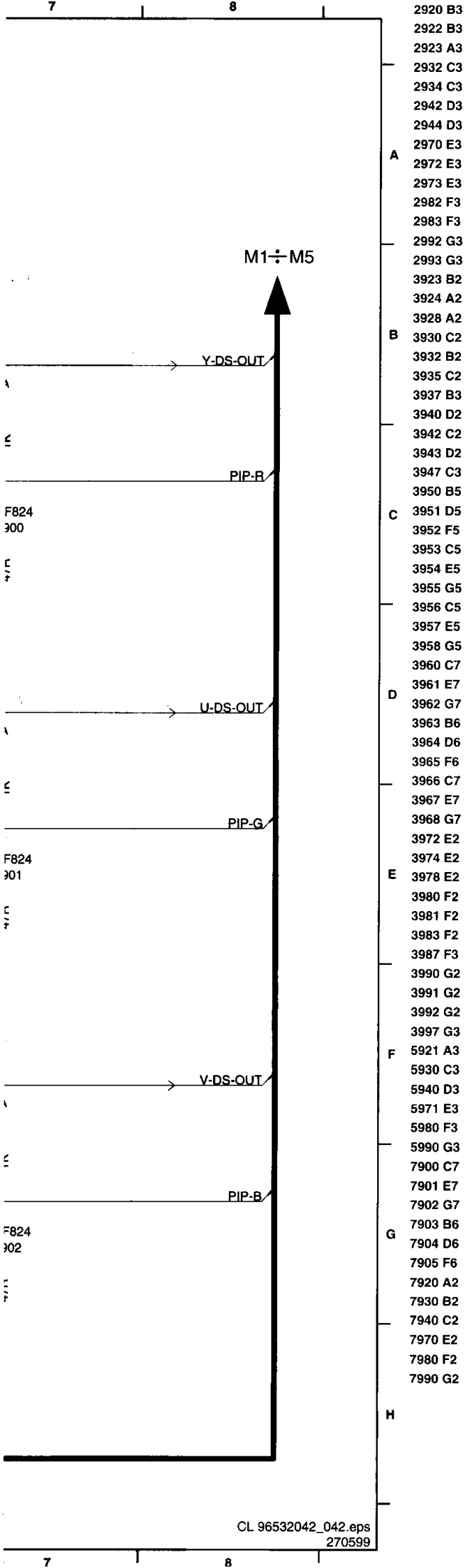
Full dualscreen / PIP module

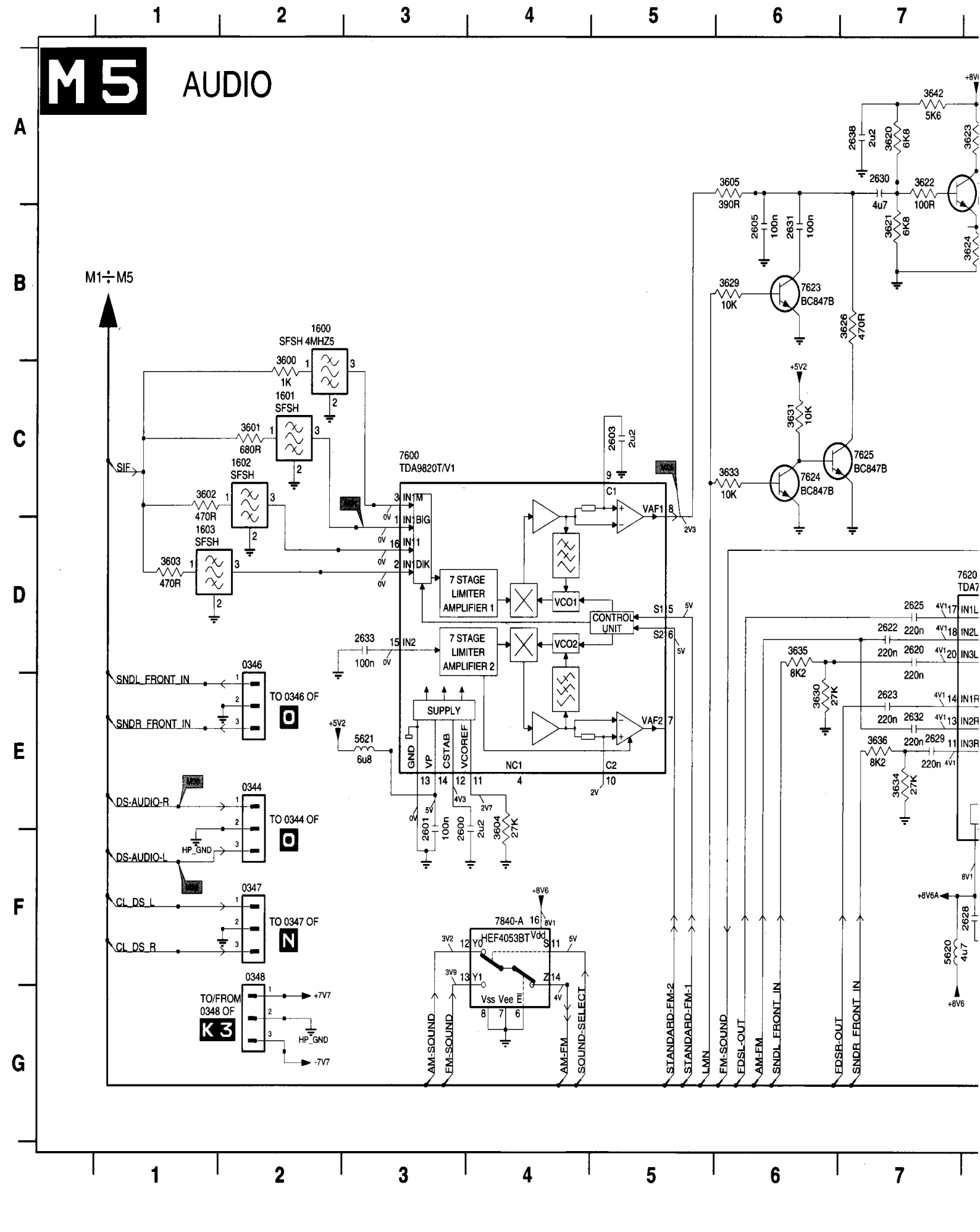


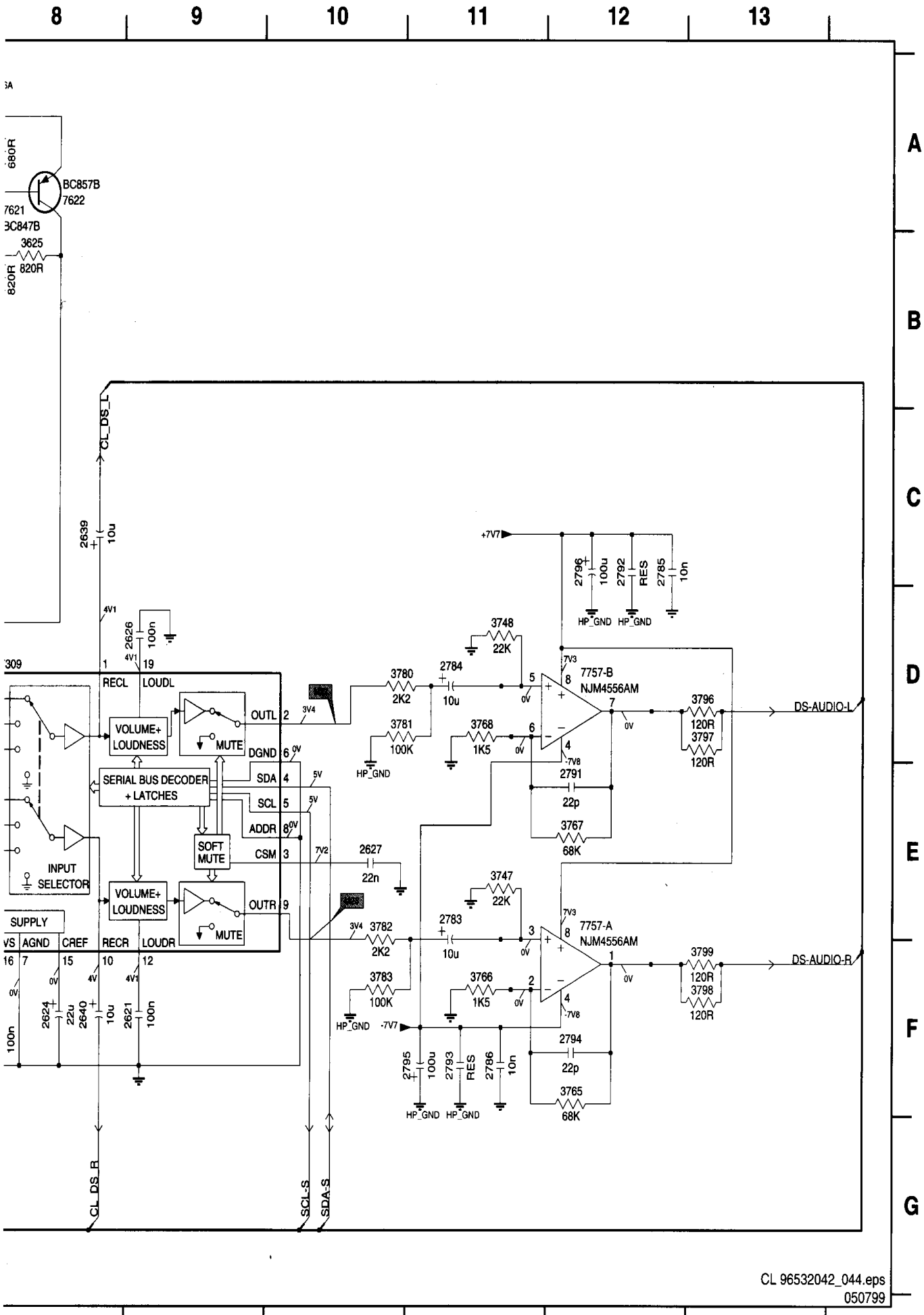


2920 B3
2922 B3
2923 A3
2932 C3
2934 C3
2942 D3
2944 D3
2970 E3
2972 E3
2973 E3
2982 F3
2983 F3
2992 G3
2993 G3
3923 B2
3924 A2
3928 A2
3930 C2
3932 B2
3935 C2
3937 B3
3940 D2
3942 C2
3943 D2
3947 C3
3950 B5
3951 D5
3952 F5
3953 C5
3954 E5
3955 G5
3956 C5
3957 E5
3958 G5
3960 C7
3961 E7
3962 G7
3963 B6
3964 D6
3965 F6
3966 C7
3967 E7
3968 G7
3972 E2
3974 E2
3978 E2
3980 F2
3981 F2
3983 F2
3987 F3
3990 G2
3991 G2
3992 G2
3997 G3
5921 A3
5930 C3
5940 D3
5971 E3
5980 F3
5990 G3
7900 C7
7901 E7
7902 G7
7903 B6
7904 D6
7905 F6
7920 A2
7930 B2
7940 C2
7970 E2
7980 F2
7990 G2

A
B
C
D
E
F
G
H

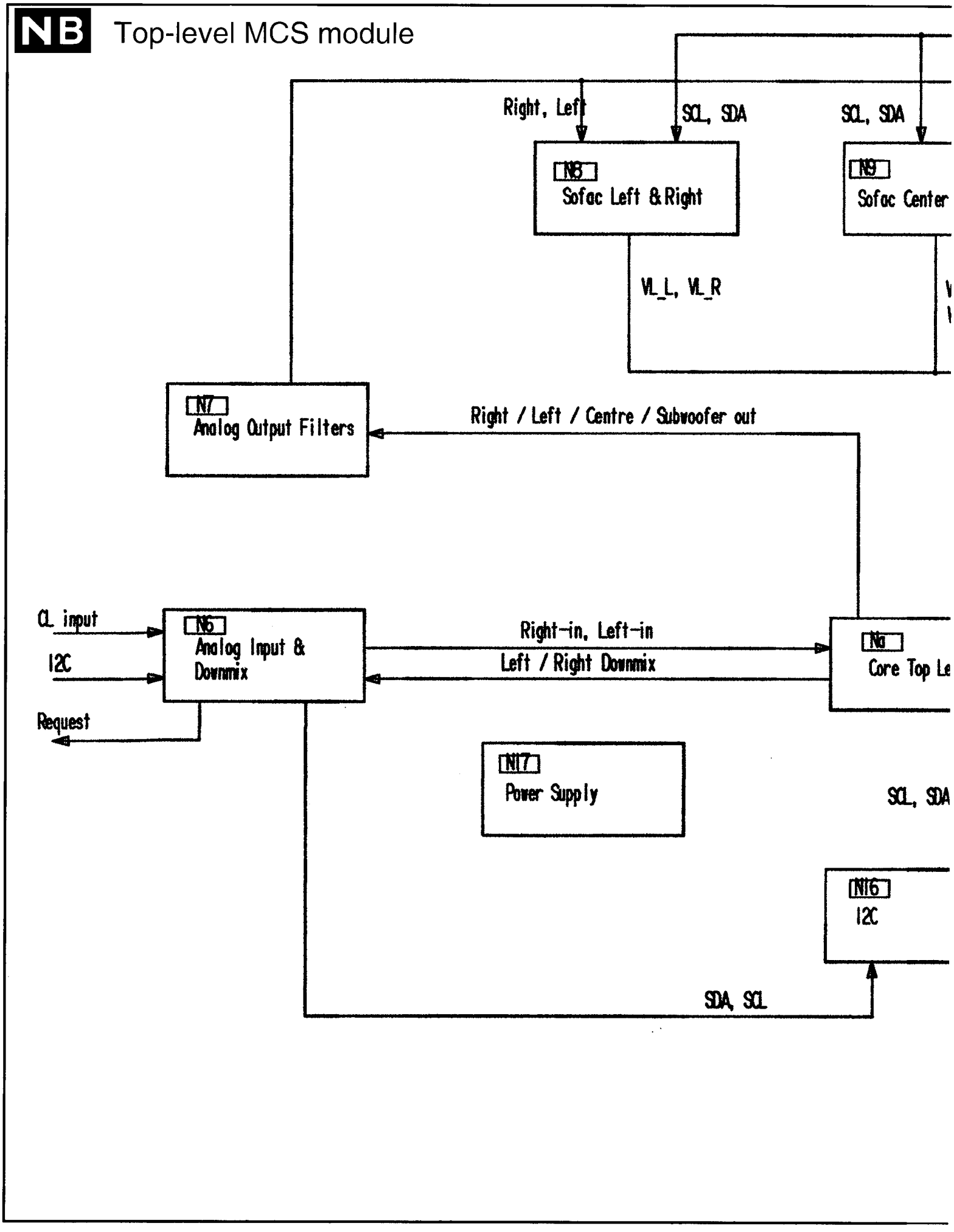
Full dualscreen / PIP module

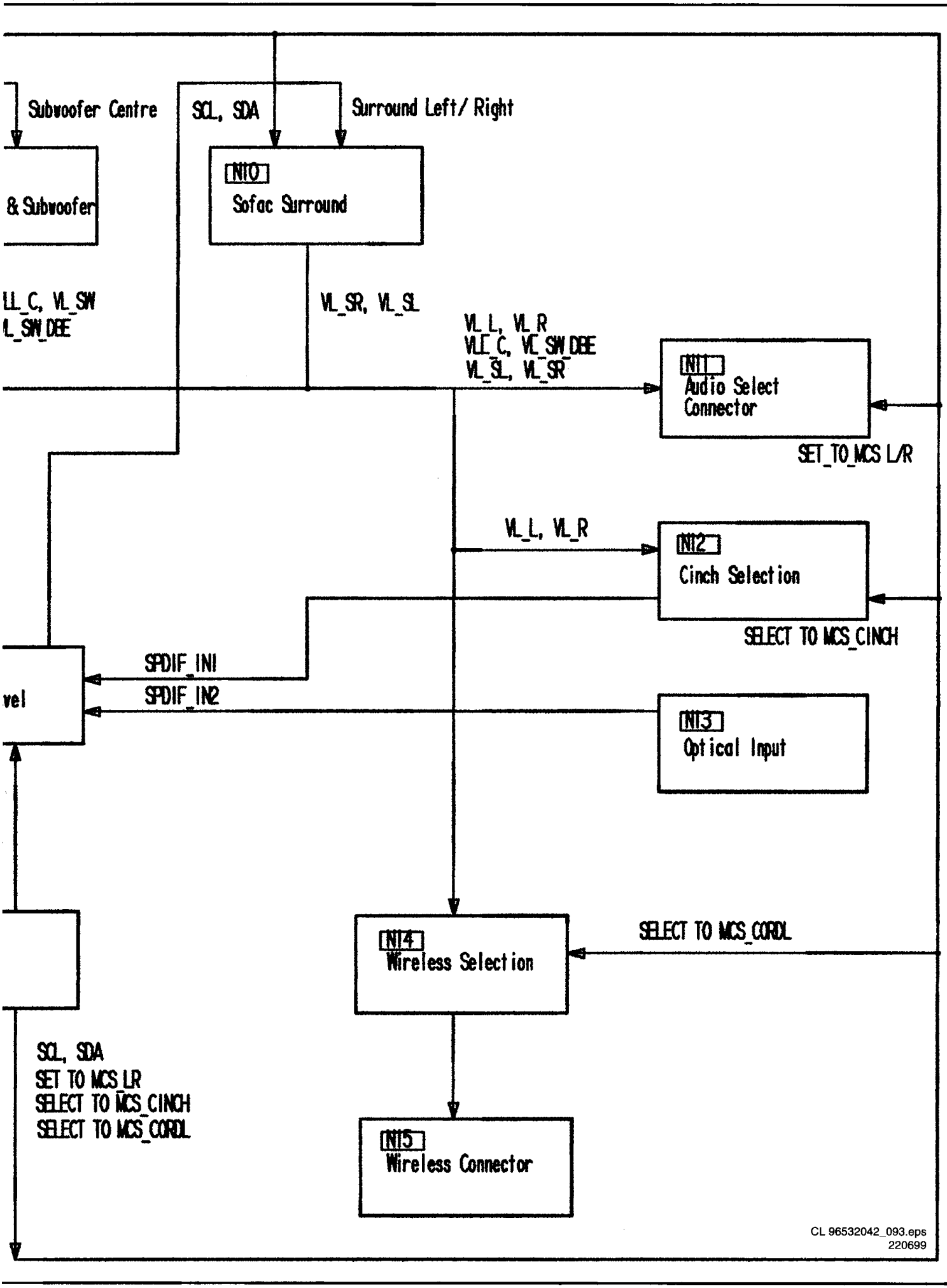




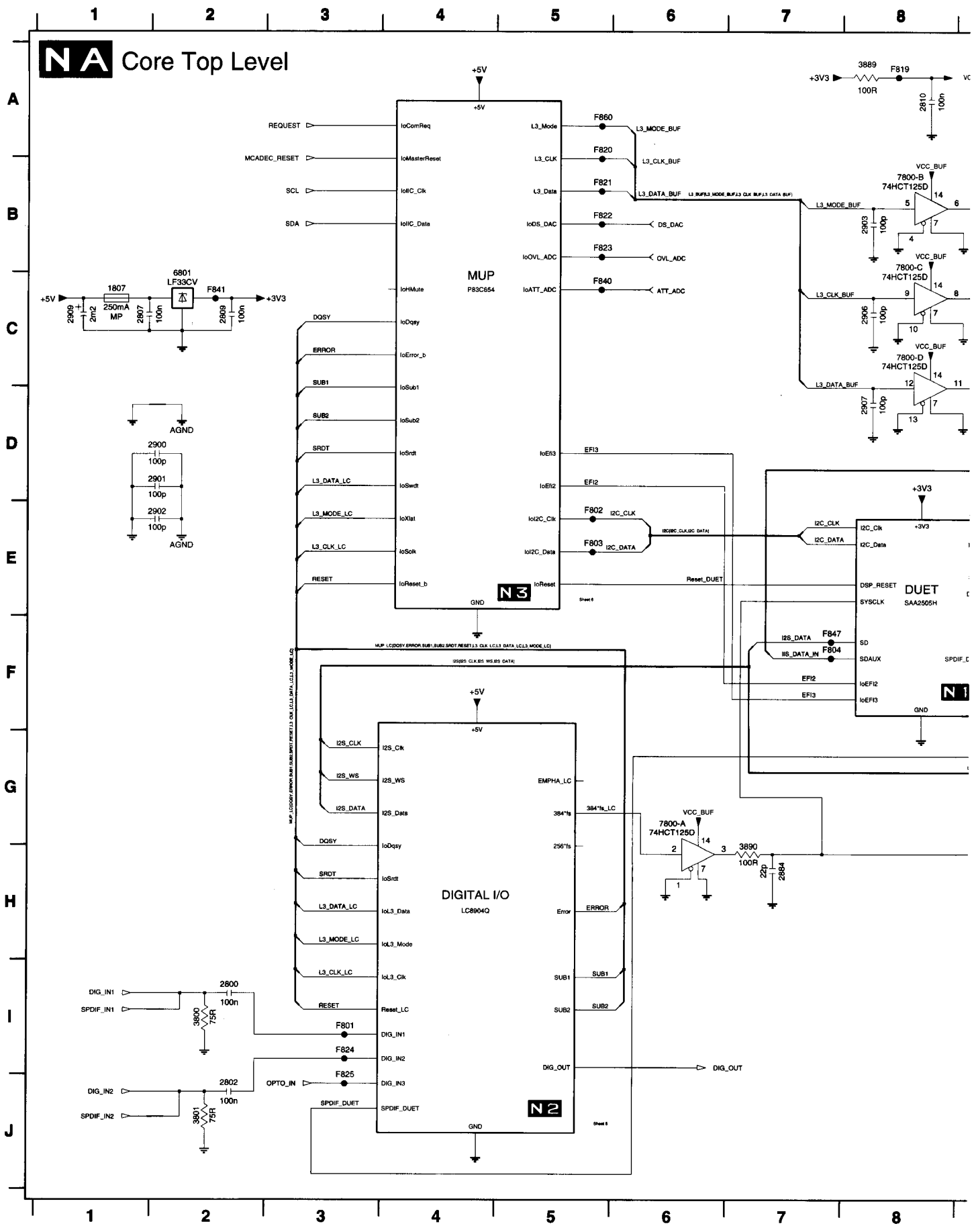
0344 E2 7840-A F4
0346 D2
0347 F2
0348 F2
1600 B2
1601 C2
1602 C2
1603 D1
2600 E3
2601 E3
2603 C5
2605 B6
2620 D7
2621 F9
2622 D7
2623 E7
2624 F8
2625 D7
2626 D9
2627 E10
2628 F8
2629 E7
2630 A7
2631 B6
2632 E7
2633 D3
2783 E11
2784 D11
2785 C12
2786 F11
2791 E12
2792 C12
2793 F11
2794 F12
2795 F11
2796 C12
2XXX A7
2XXX C8
2XXX F8
3600 C2
3601 C2
3602 C1
3603 D1
3604 E4
3605 A6
3620 A7
3621 B7
3622 A7
3623 A8
3624 B8
3625 B8
3626 B7
3629 B6
3630 E6
3631 C6
3633 C6
3634 E7
3635 D6
3636 E7
3747 E11
3748 D11
3765 F12
3766 F11
3767 E12
3768 D11
3796 D13
3797 D13
3798 F13
3799 F13
3XXX D10
3XXX D10
3XXX E10
3XXX F10
3XXX A7
5620 F7
5621 E3
7600 C3
7620 D7
7621 A8
7622 A8
7623 B6
7624 C6
7625 C7
7757-A E12
7757-B D12

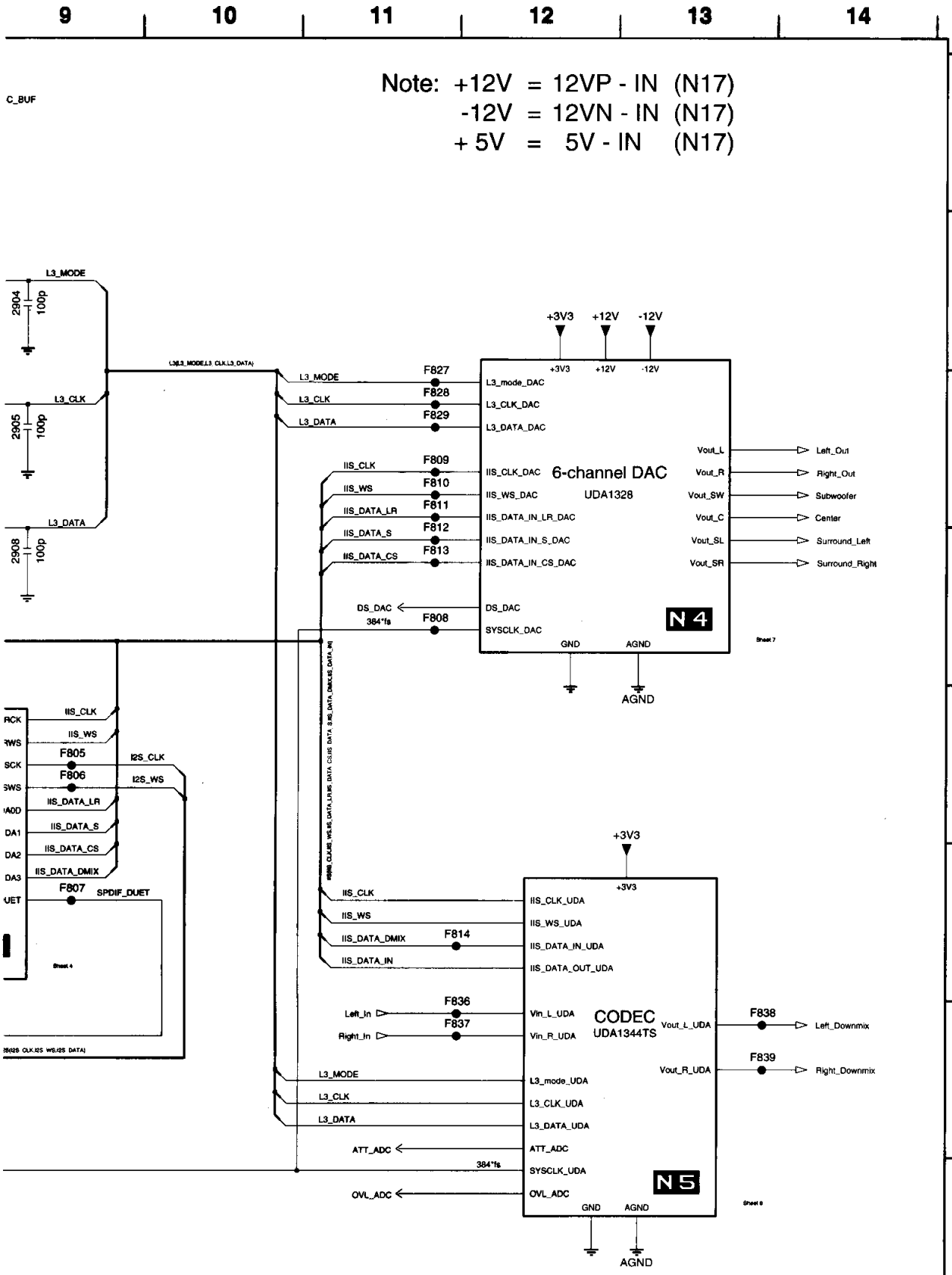
Multi-channel sound module




Subwoofer Centre
SCL, SDA
Surround Left/ Right
& Subwoofer
N10
Sofac Surround
LL_C, VL_SW
L_SW_DBE
VL_SR, VL_SL
VL_L, VL_R
VL_C, VL_SW_DBE
VL_SL, VL_SR
N11
Audio Select
Connector
SET_TO_MCS L/R
VL_L, VL_R
N12
Cinch Selection
SELECT TO MCS_CINCH
vel
SPDIF_IN1
SPDIF_IN2
N13
Optical Input
N14
Wireless Selection
SELECT TO MCS_CORDL
SCL, SDA
SET TO MCS LR
SELECT TO MCS_CINCH
SELECT TO MCS_CORDL
N15
Wireless Connector
CL 96532042_093.eps
220699

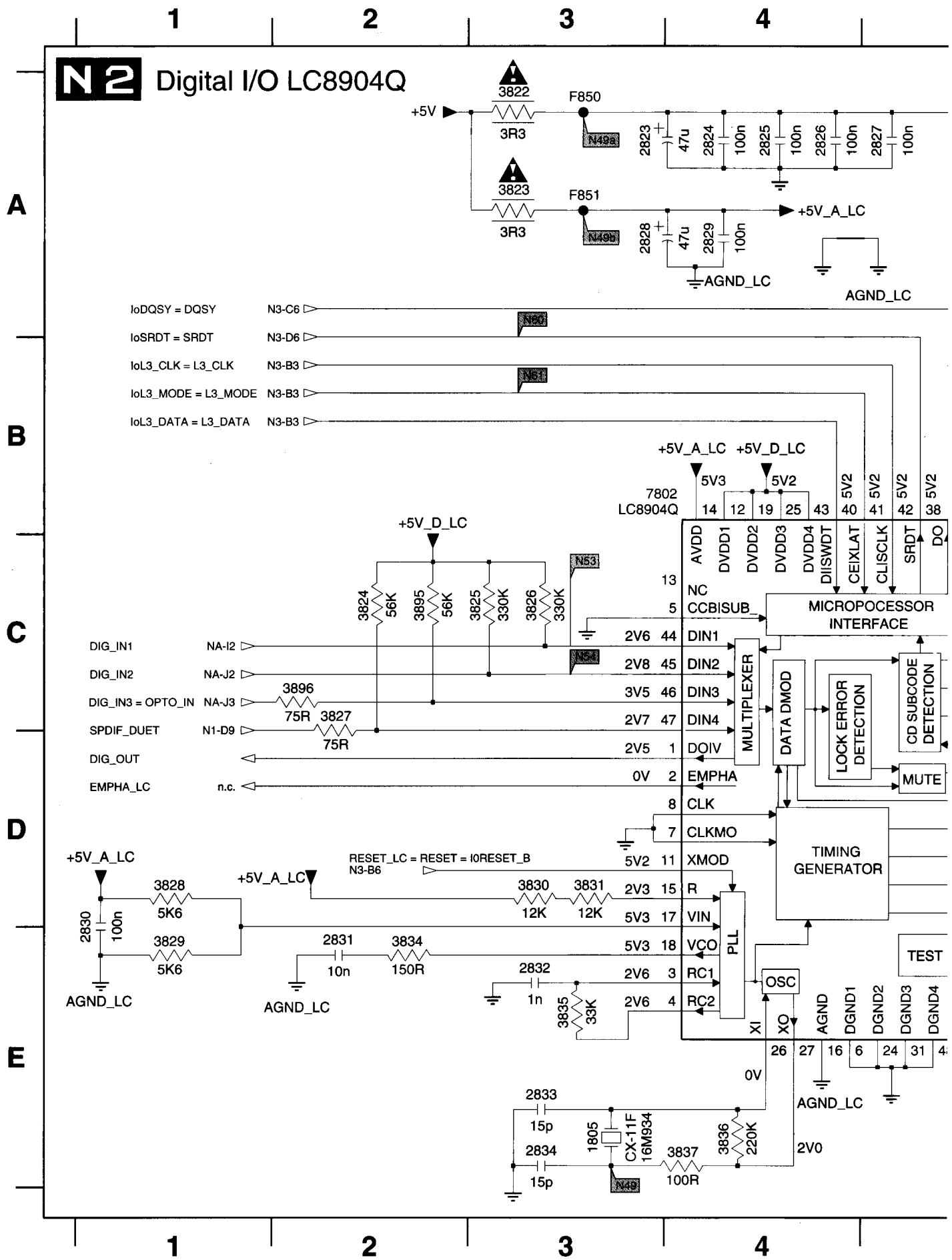
Multi-channel sound module

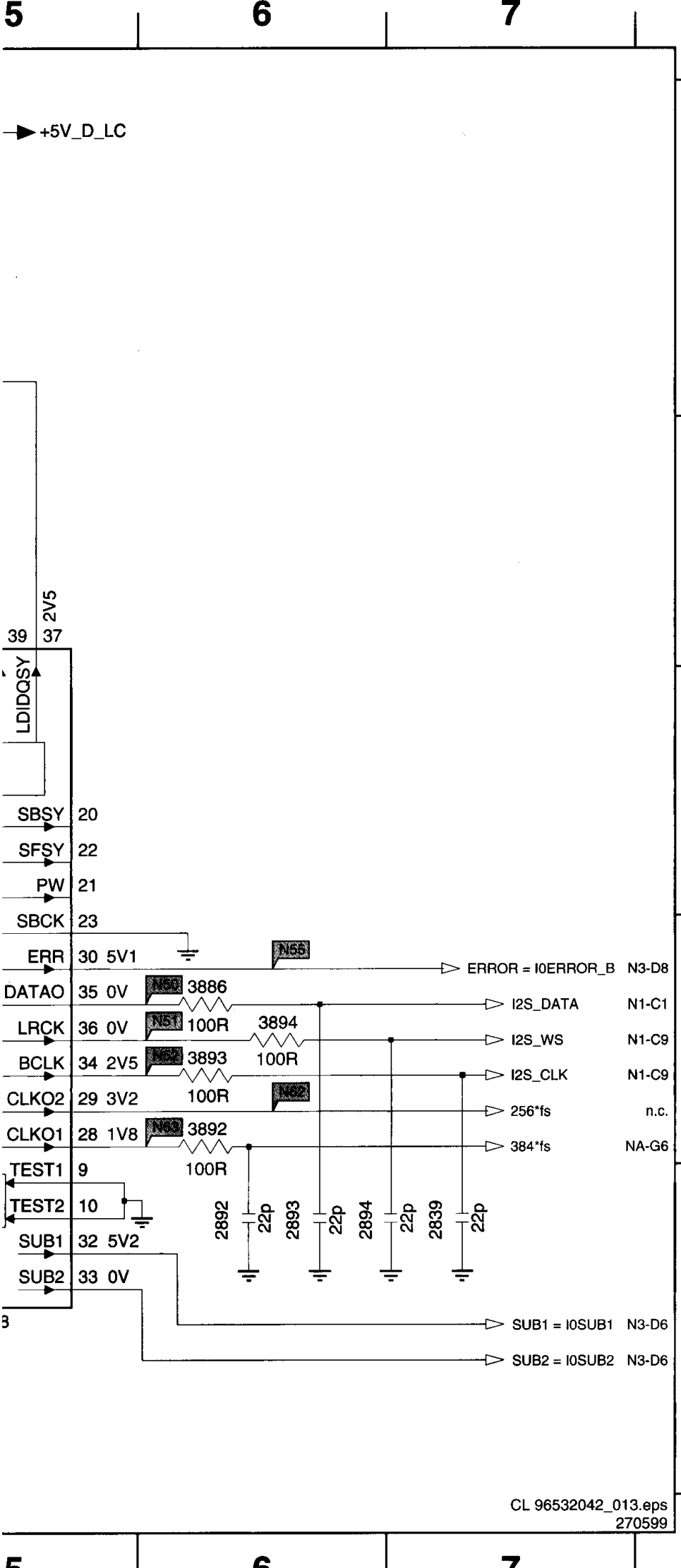




2800 I2
2802 J2
2807 C1
2809 C2
2810 A8
2884 H7
2900 D2
2901 D2
2902 E2
2903 B8
2904 B9
2905 C9
2906 C8
2907 D8
2908 D9
2909 C1
3800 I2
3801 J2
3889 A8
3890 H7
6801 C2
7800-A G6
7800-B B8
7800-C B8
7800-D C8
F801 I3
F802 E5
F803 E5
F804 F7
F805 E9
F806 E9
F807 F9
F808 D11
F809 C11
F810 C11
F811 C11
F812 D11
F813 D11
F814 F11
F819 A8
F820 A5
F821 B5
F822 B5
F823 B5
F824 I3
F825 J3
F827 C11
F828 C11
F829 C11
F836 G11
F837 G11
F838 G13
F839 G13
F840 C5
F841 A2
F847 F7
F860 A5

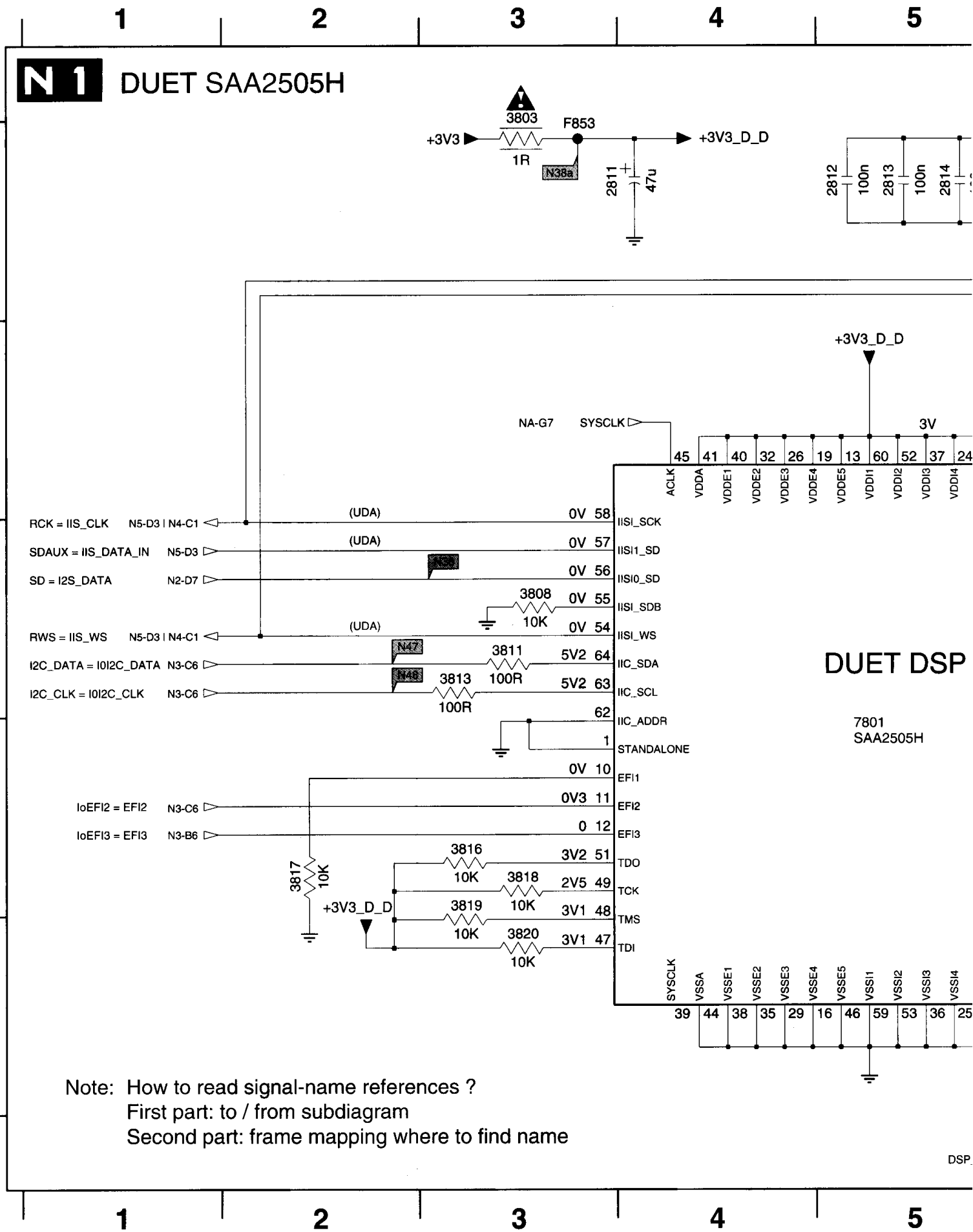
Multi-channel sound module

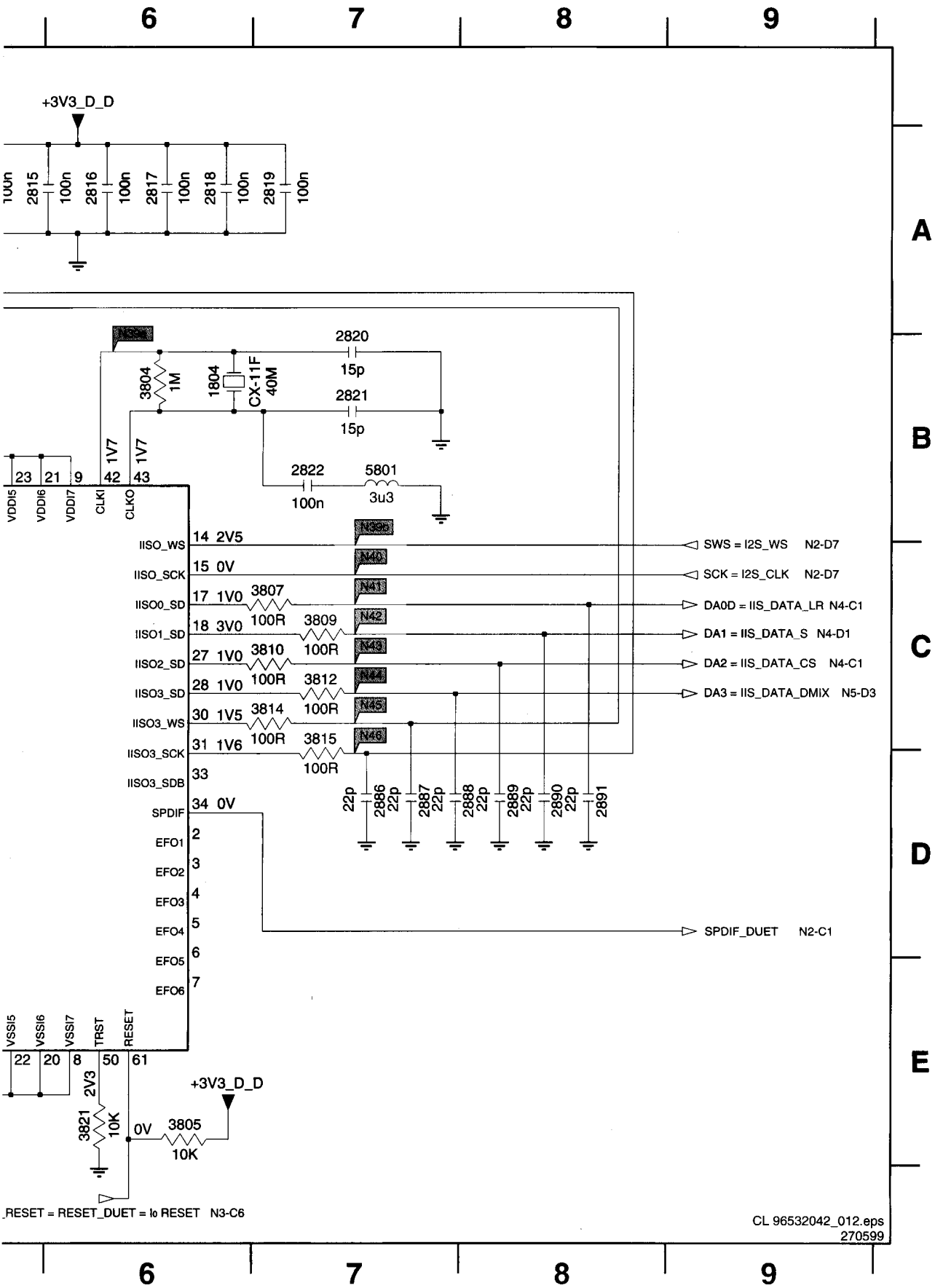




1805 E3
2823 A3
2824 A4
2825 A4
2826 A4
2827 A5
2828 A3
2829 A4
2830 D1
2831 E2
2832 E3
2833 E3
2834 E3
2839 E7
2892 E6
2893 E6
2894 E6
3822 A3
3823 A3
3824 C2
3825 C3
3826 C3
3827 C2
3828 D1
3829 E1
3830 D3
3831 D3
3834 E2
3835 E3
3836 E4
3837 E4
3886 D6
3892 D6
3893 D6
3894 D6
3895 C3
3896 C2
7802 B3
F850 A2
F851 A2

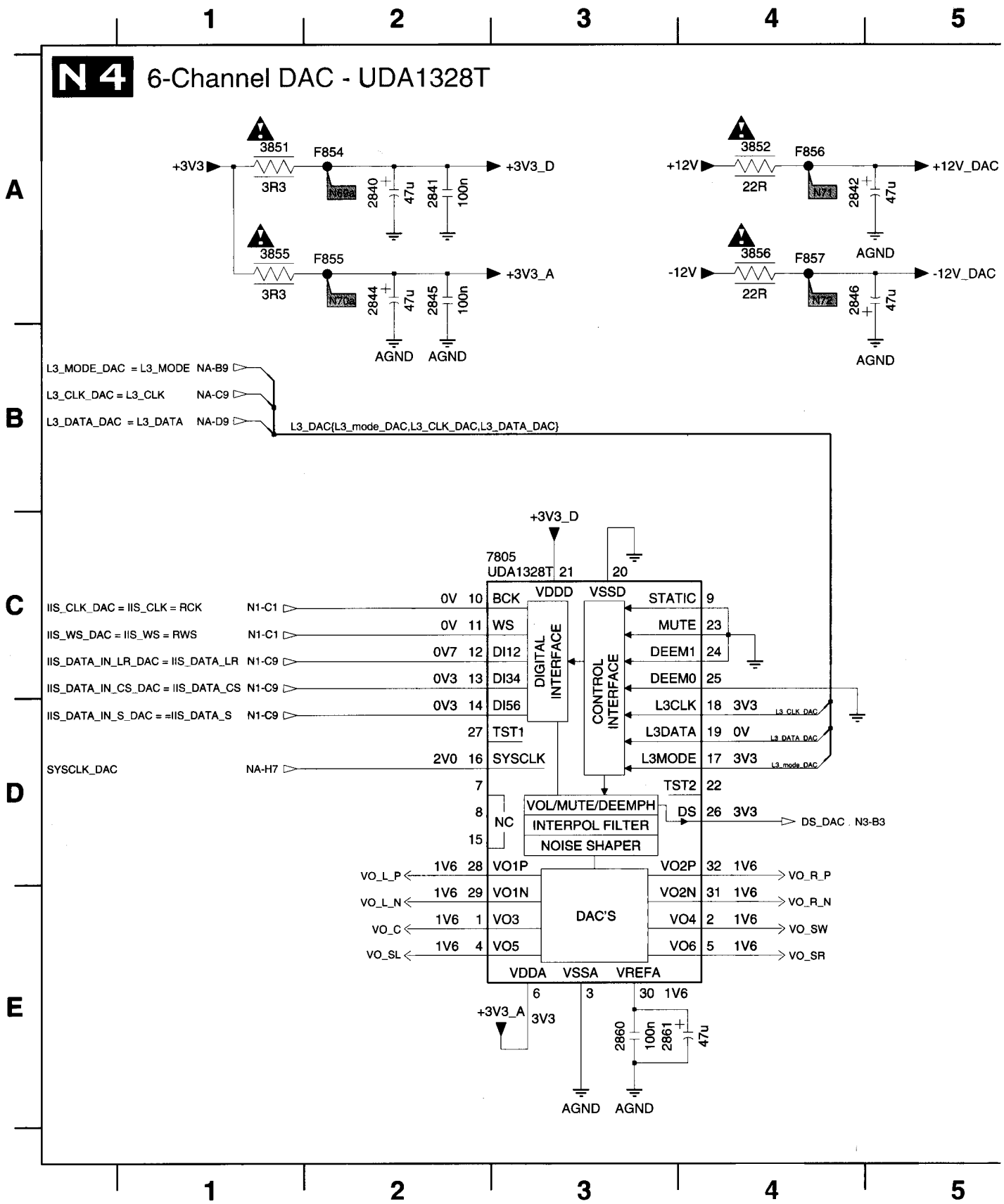
Multi-channel sound module

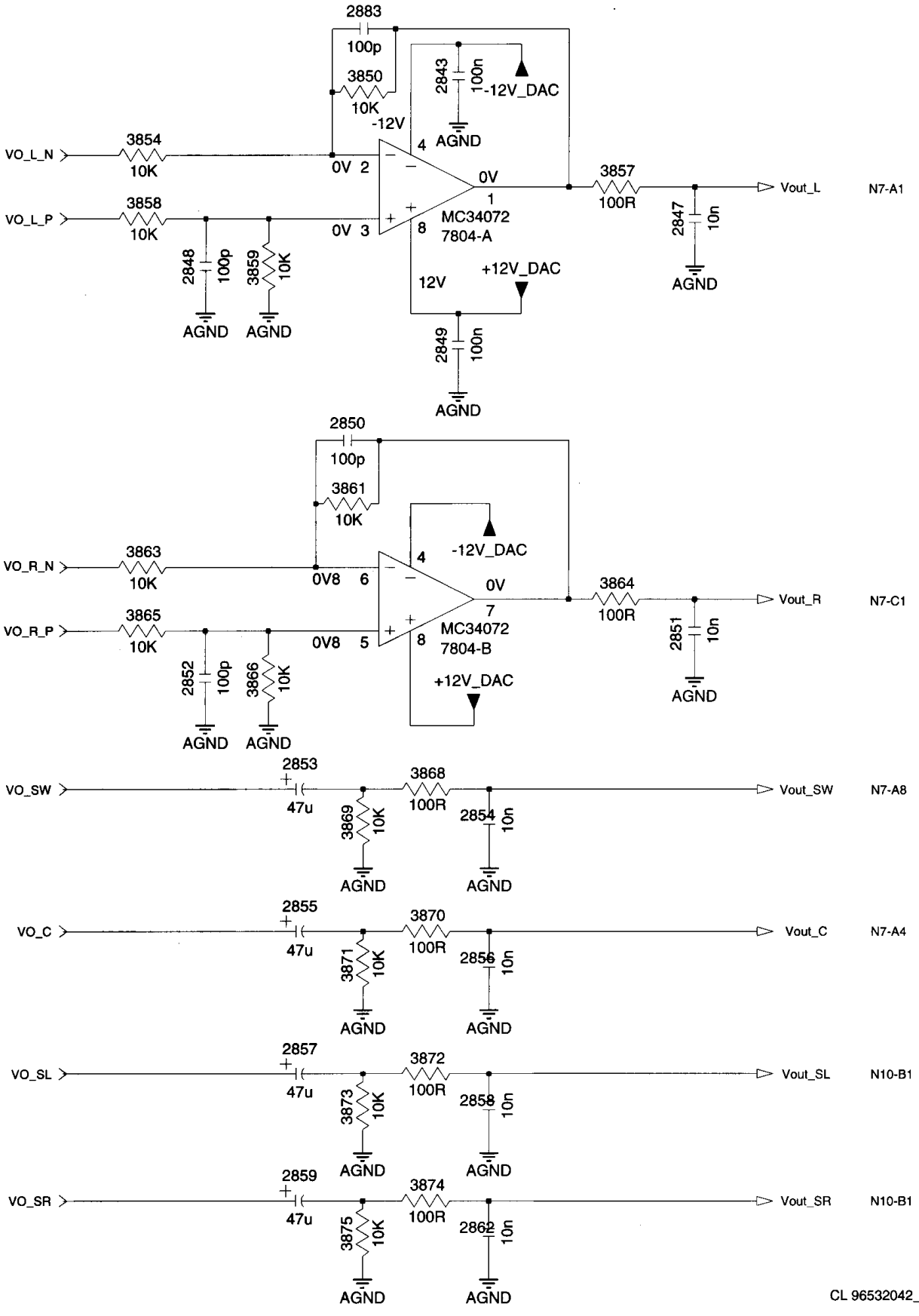




1804 B6
2811 A4
2812 A5
2813 A5
2814 A5
2815 A5
2816 A6
2817 A6
2818 A6
2819 A7
2820 B7
2821 B7
2822 B7
2886 D7
2887 D7
2888 D8
2889 D8
2890 D8
2891 D8
3803 A3
3804 B6
3805 E6
3807 C7
3808 C3
3809 C7
3810 C7
3811 C3
3812 C7
3813 C3
3814 C7
3815 C7
3816 D3
3817 D2
3818 D3
3819 D3
3820 E3
3821 E6
5801 B7
7801 D5
F853 A1

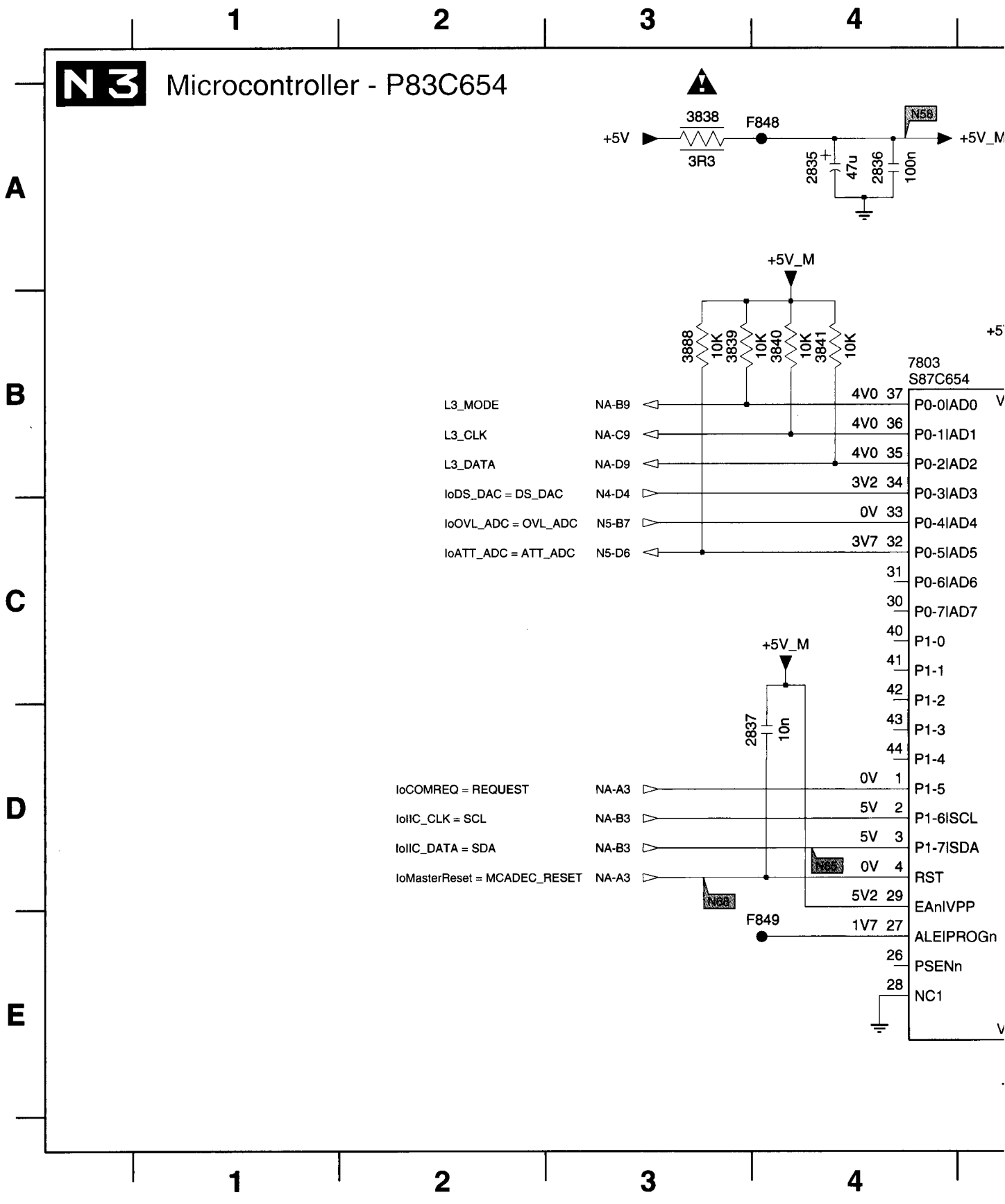
Multi-channel sound module

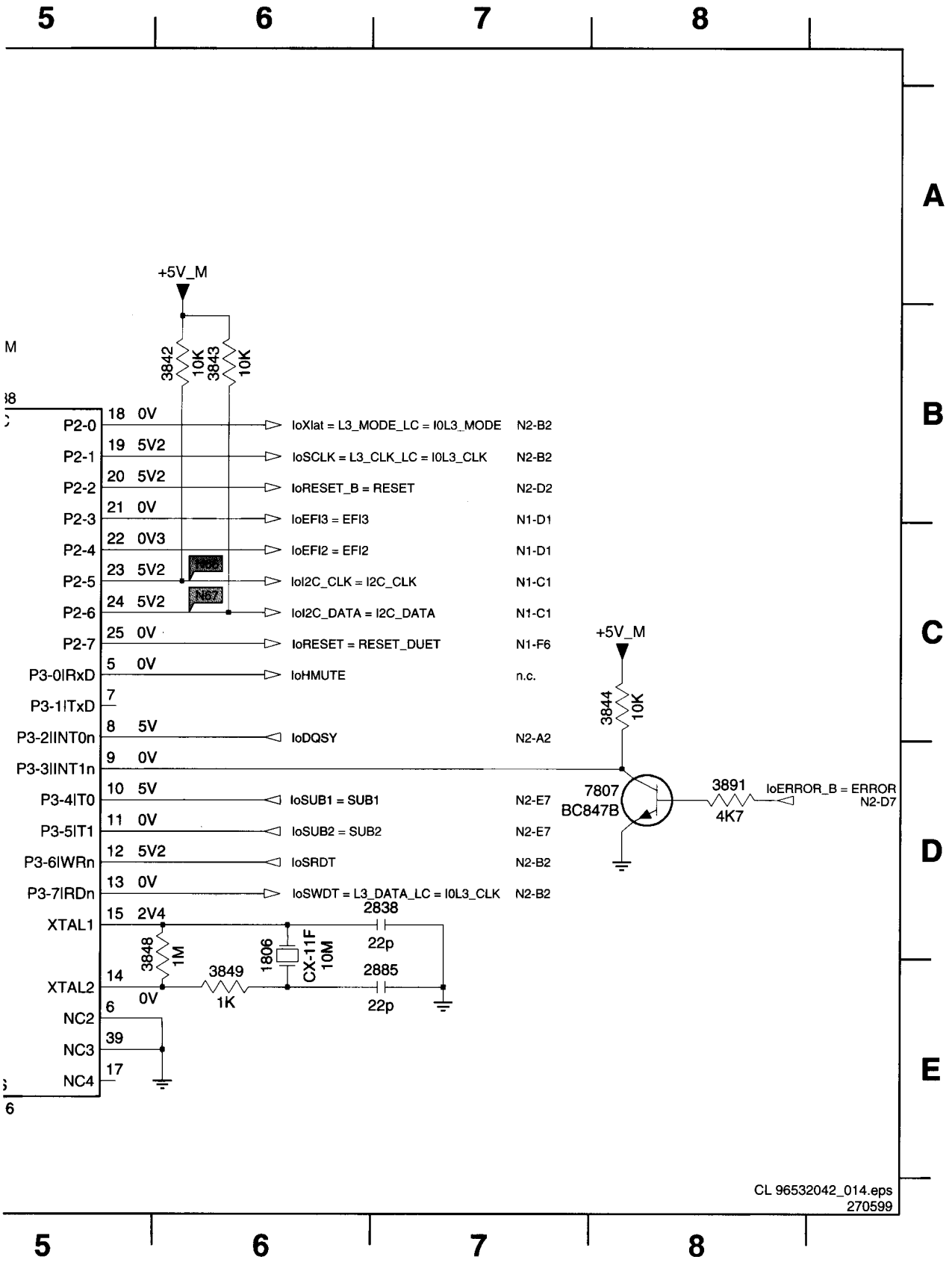




2840 A2
2841 A2
2842 A4
2843 A7
2844 A2
2845 A2
2846 A4
2847 A9
2848 A6
2849 B7
2850 B7
2851 C9
2852 C6
2853 D7
2854 D8
2855 D7
2856 D8
2857 E7
2858 E8
2859 E7
2860 E3
2861 E3
2862 E8
2883 A7
3850 A7
3851 A1
3852 A4
3854 A6
3855 A1
3856 A4
3857 A8
3858 A6
3859 A7
3861 B7
3863 C6
3864 C8
3865 C6
3866 C7
3868 D7
3869 D7
3870 D7
3871 D7
3872 E7
3873 E7
3874 E7
3875 E7
7804-A A7
7804-B C7
7805 C2
F854 A2
F855 A2
F856 A4
F857 A4

Multi-channel sound module





1806 D6
2835 A4
2836 A4
2837 D4
2838 D7
2885 E7
3838 A3
3839 B3
3840 B4
3841 B4
3842 B6
3843 B6
3844 C7
3848 D5
3849 E6
3888 B3
3891 D8
7803 B4
7807 D7
F848 A4
F849 E4

Multi-channel sound module

0373 D9	2505 A8	2512 D6	2524 C1	2537 D4	3501 B6	3506 A9	3511 B8	3516 A9	3521 D2	35
0381 A6	2506 C8	2520 C2	2525 E1	2538 E4	3502 A7	3507 C8	3512 D6	3517 B9	3522 E1	35
2500 A6	2507 B8	2521 E2	2534 C7	2539 A9	3503 C7	3508 C9	3513 C7	3518 C9	3523 E2	35
2501 C6	2508 D8	2522 D2	2535 C4	2793 C9	3504 B6	3509 B7	3514 C8	3519 D5	3524 C1	35
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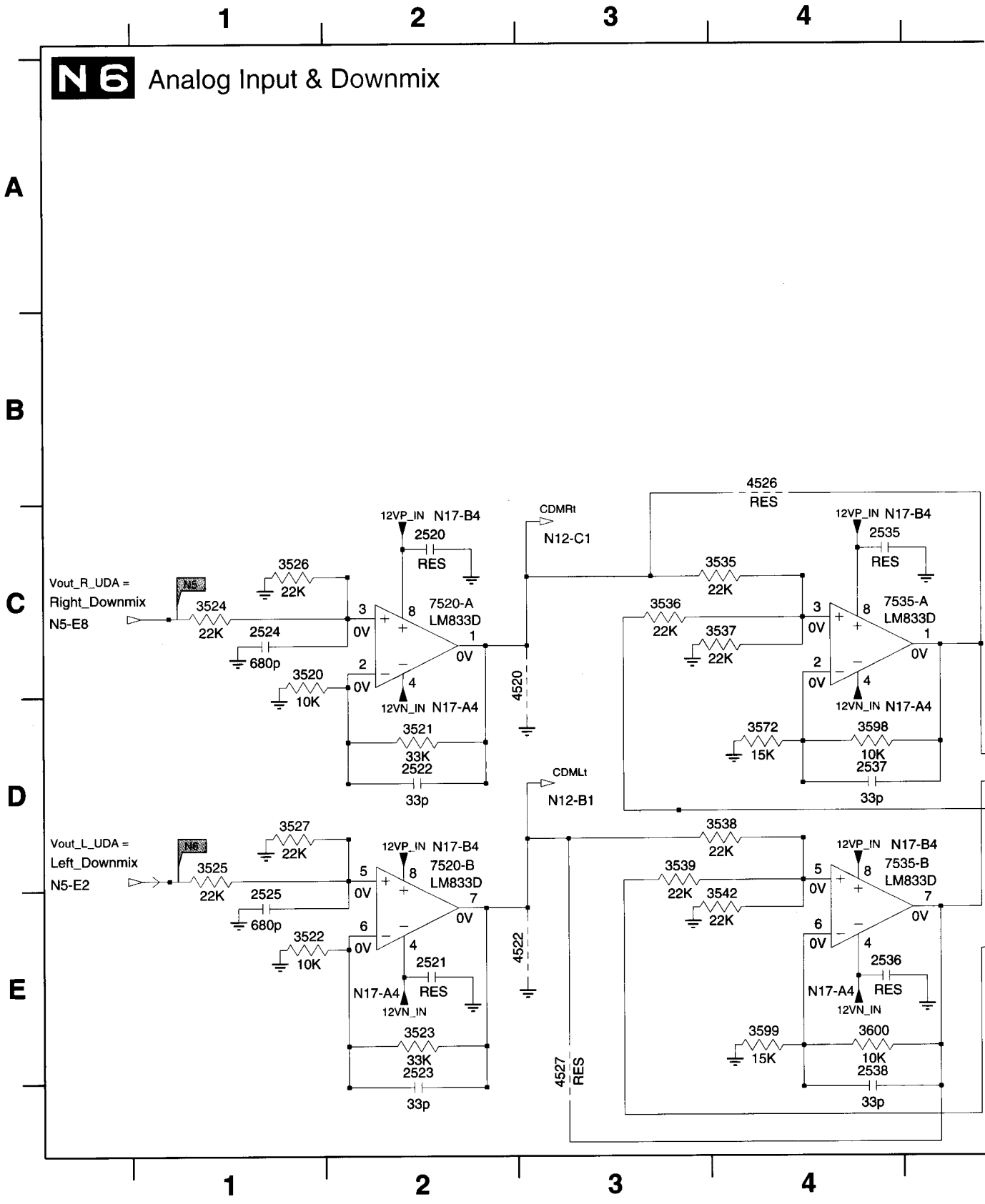
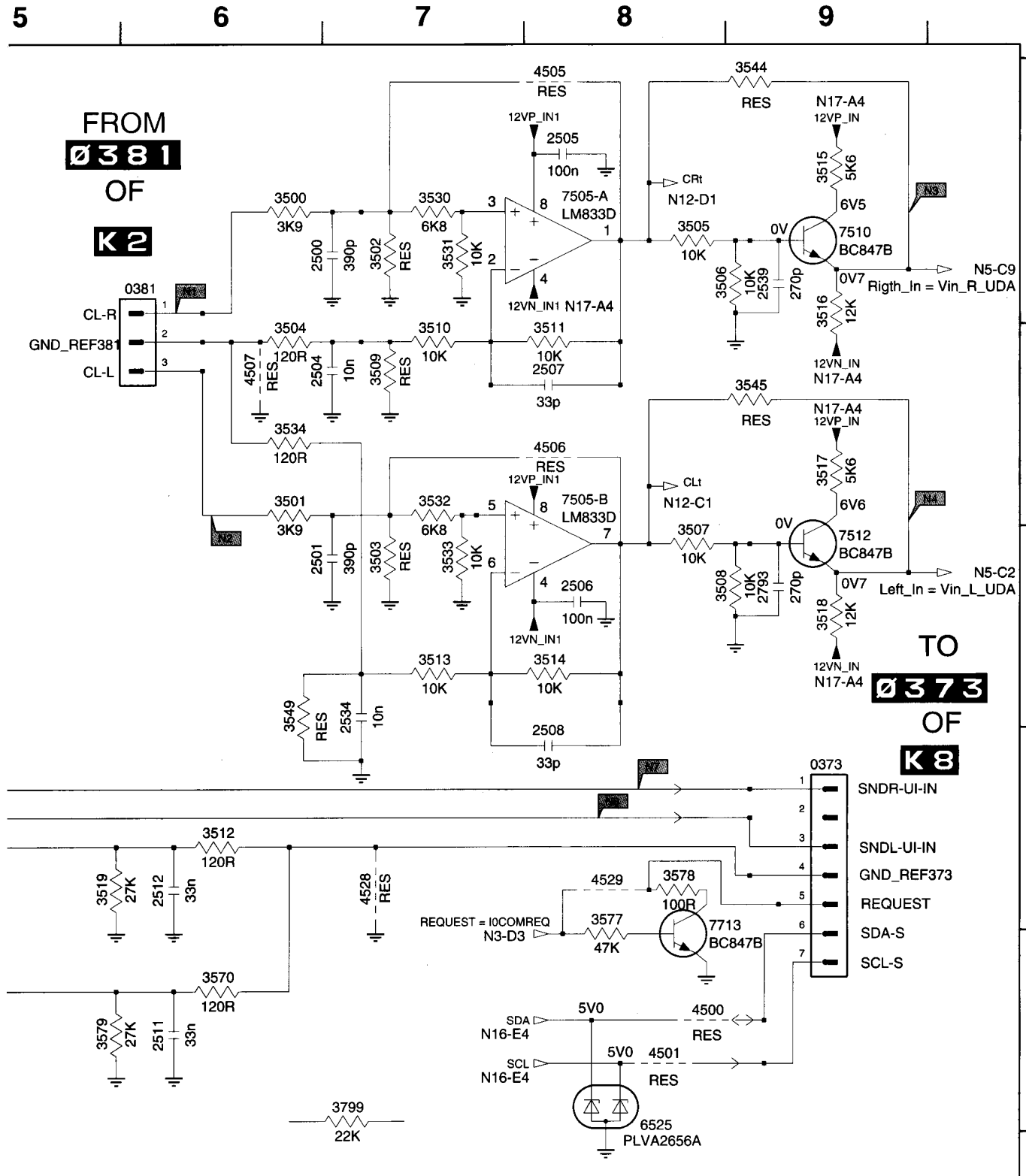
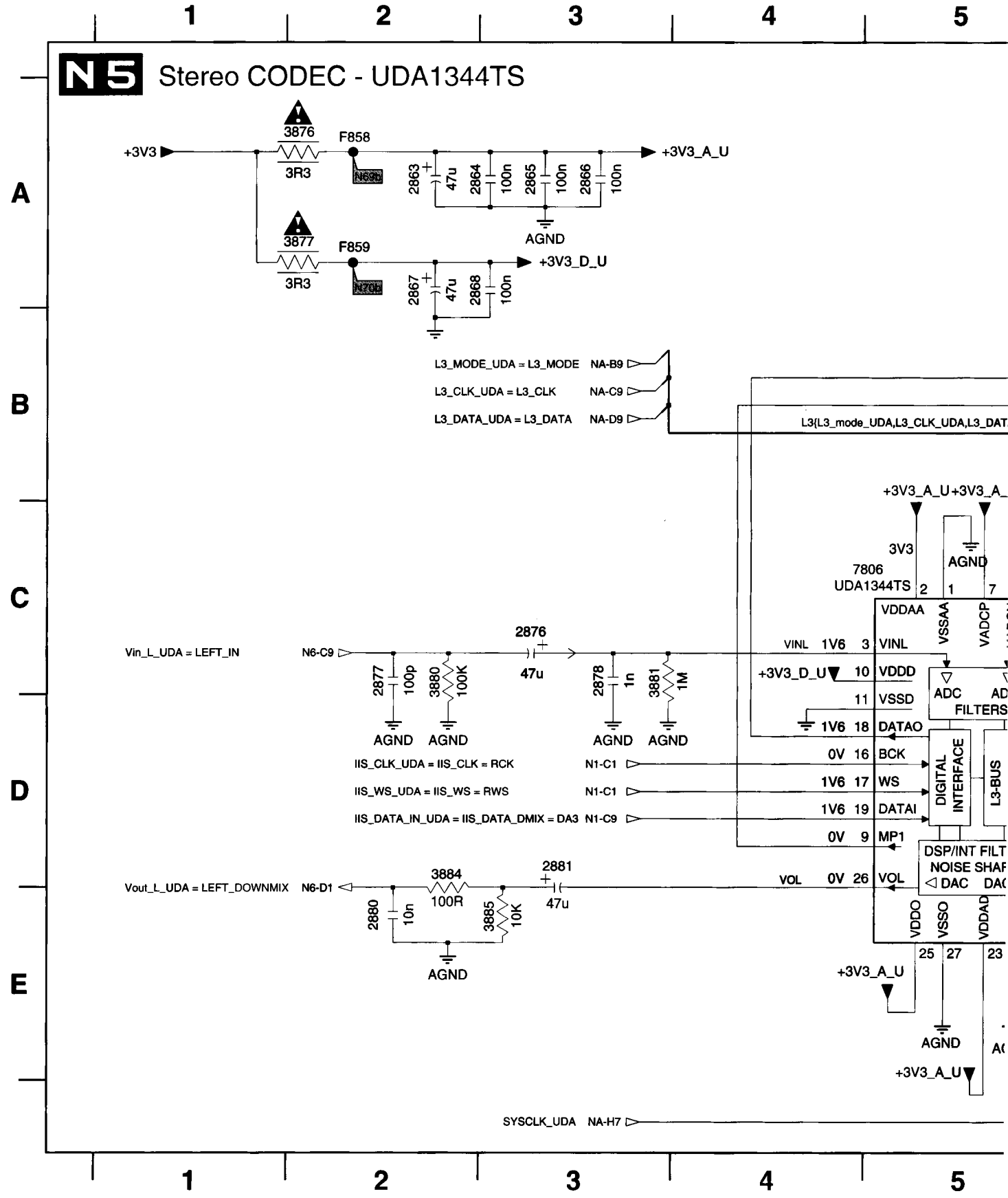
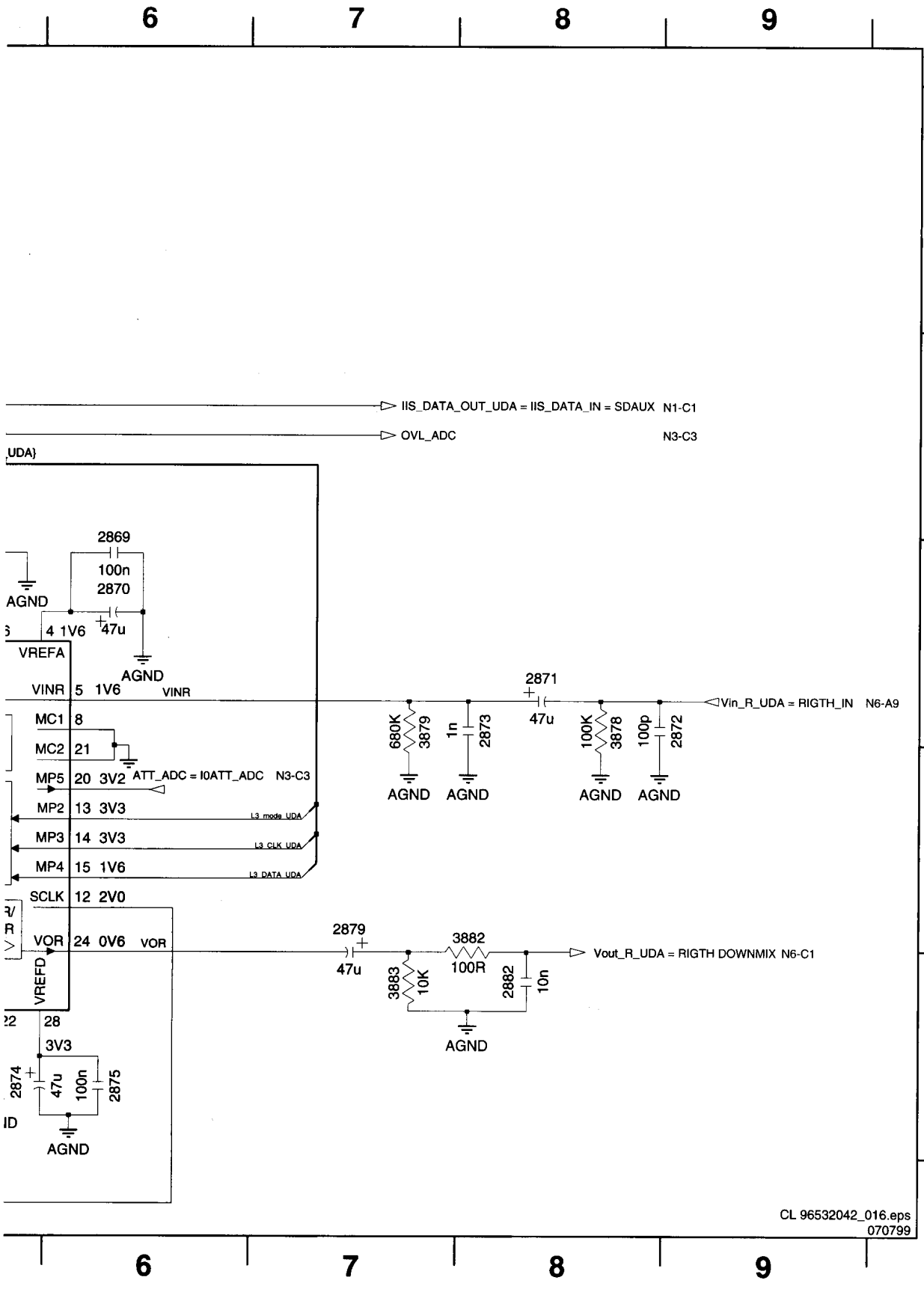


26 C1	3533 C7	3538 D4	3549 C6	3579 E5	4500 E8	4520 C3	4529 D8	7512 C9	7713 E8
27 D1	3534 B6	3539 D3	3570 E6	3598 D4	4501 E8	4522 E3	6525 E8	7520-A C2	
30 A7	3535 C4	3542 E4	3572 D4	3599 E4	4505 A8	4526 B4	7505-A A8	7520-B D2	
31 A7	3536 C3	3544 A9	3577 D8	3600 E4	4506 B8	4527 E3	7505-B B8	7535-A C4	
32 B7	3537 C4	3545 B9	3578 D8	3799 E7	4507 B6	4528 D7	7510 A9	7535-B D4	



Multi-channel sound module





2863 A2
2864 A3
2865 A3
2866 A3
2867 A2
2868 A3
2869 C6
2870 C6
2871 C8
2872 C9
2873 C8
2874 E5
2875 E6
2876 C3
2877 C2
2878 C3
2879 D7
2880 E2
2881 D3
2882 E8
3876 A2
3877 A2
3878 C8
3879 C7
3880 C2
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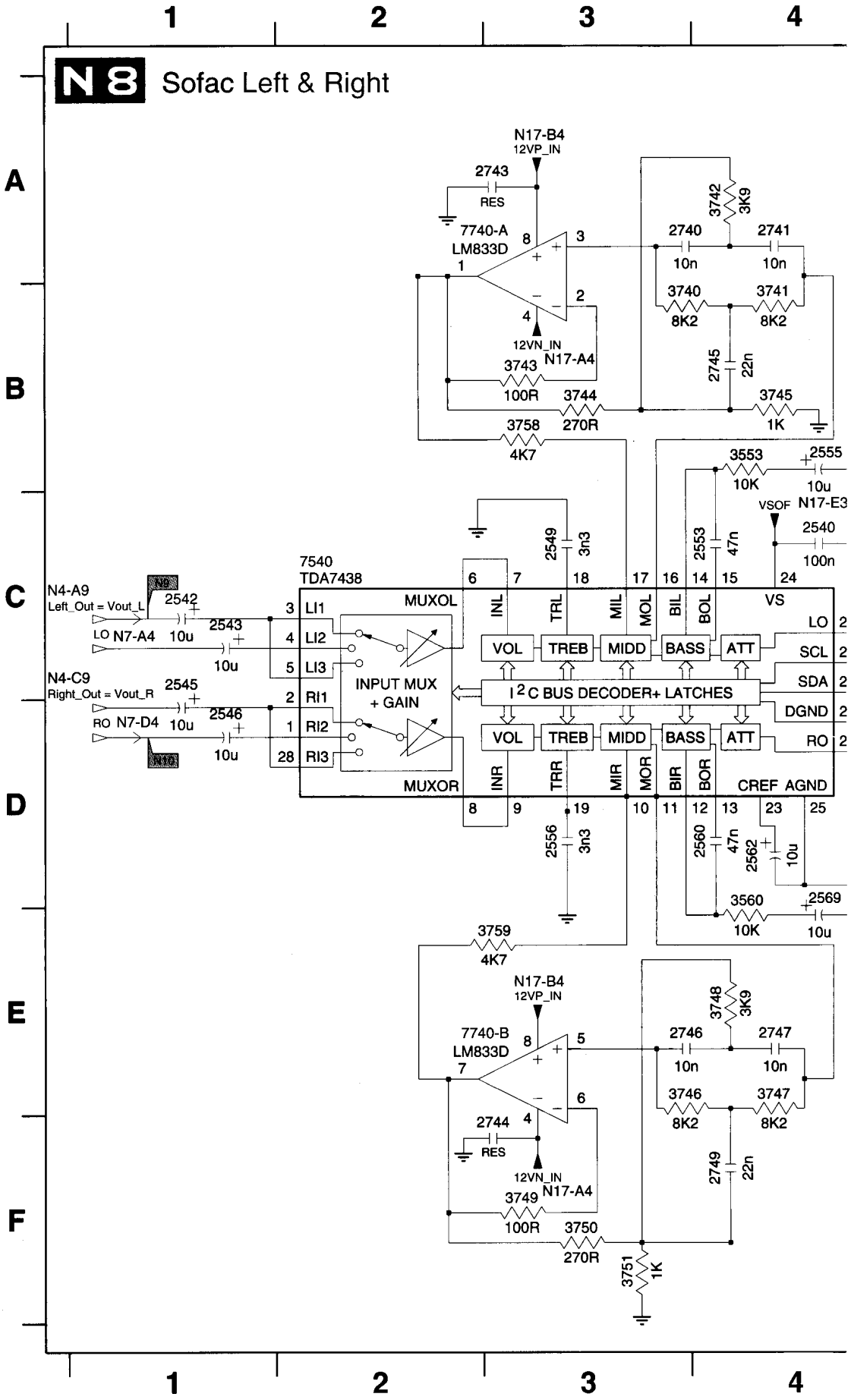
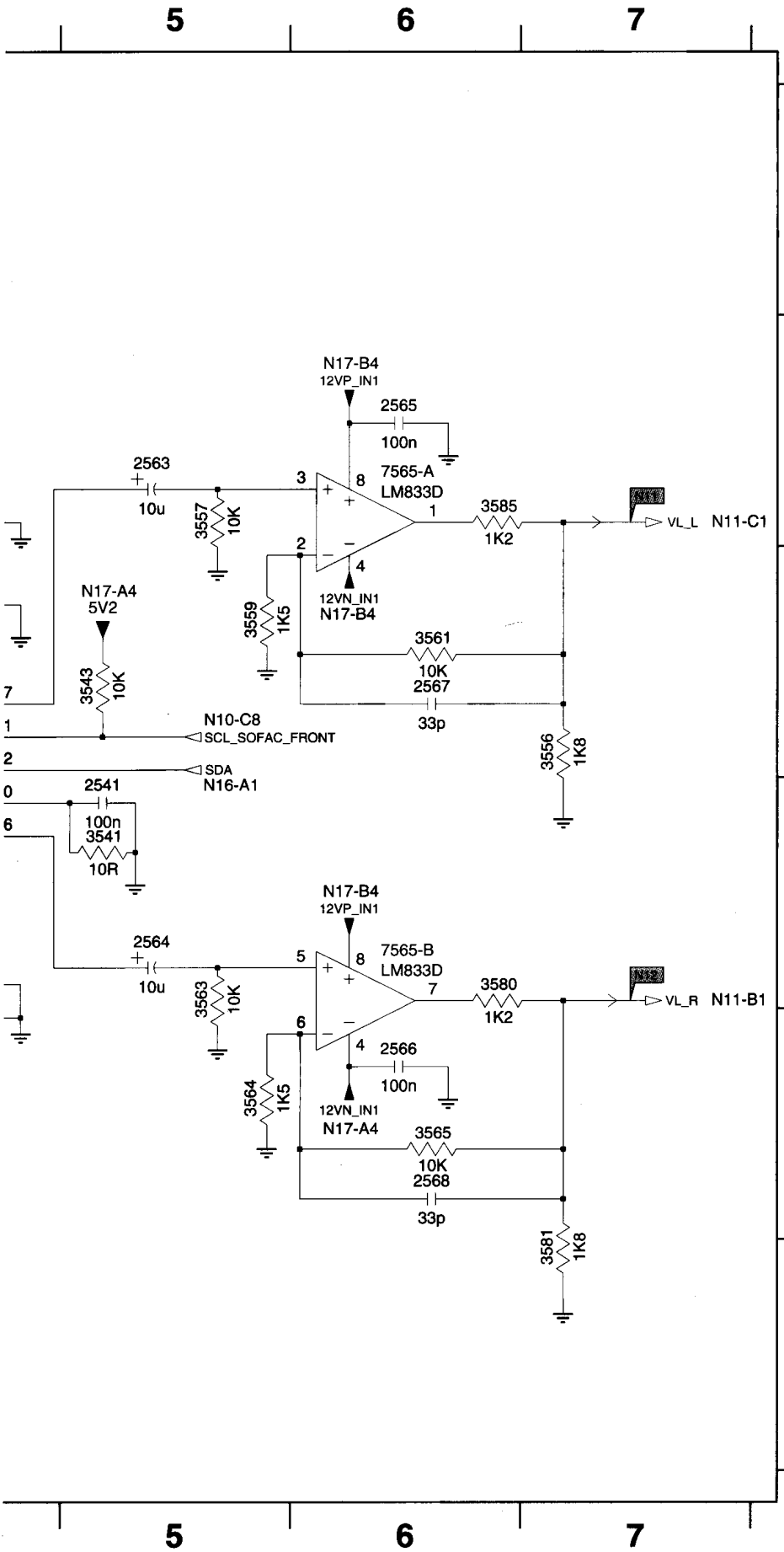
3882 D8
3883 E7
3884 D2
3885 E3
7806 C5
F858 A2
F859 A2

Multi-channel sound module





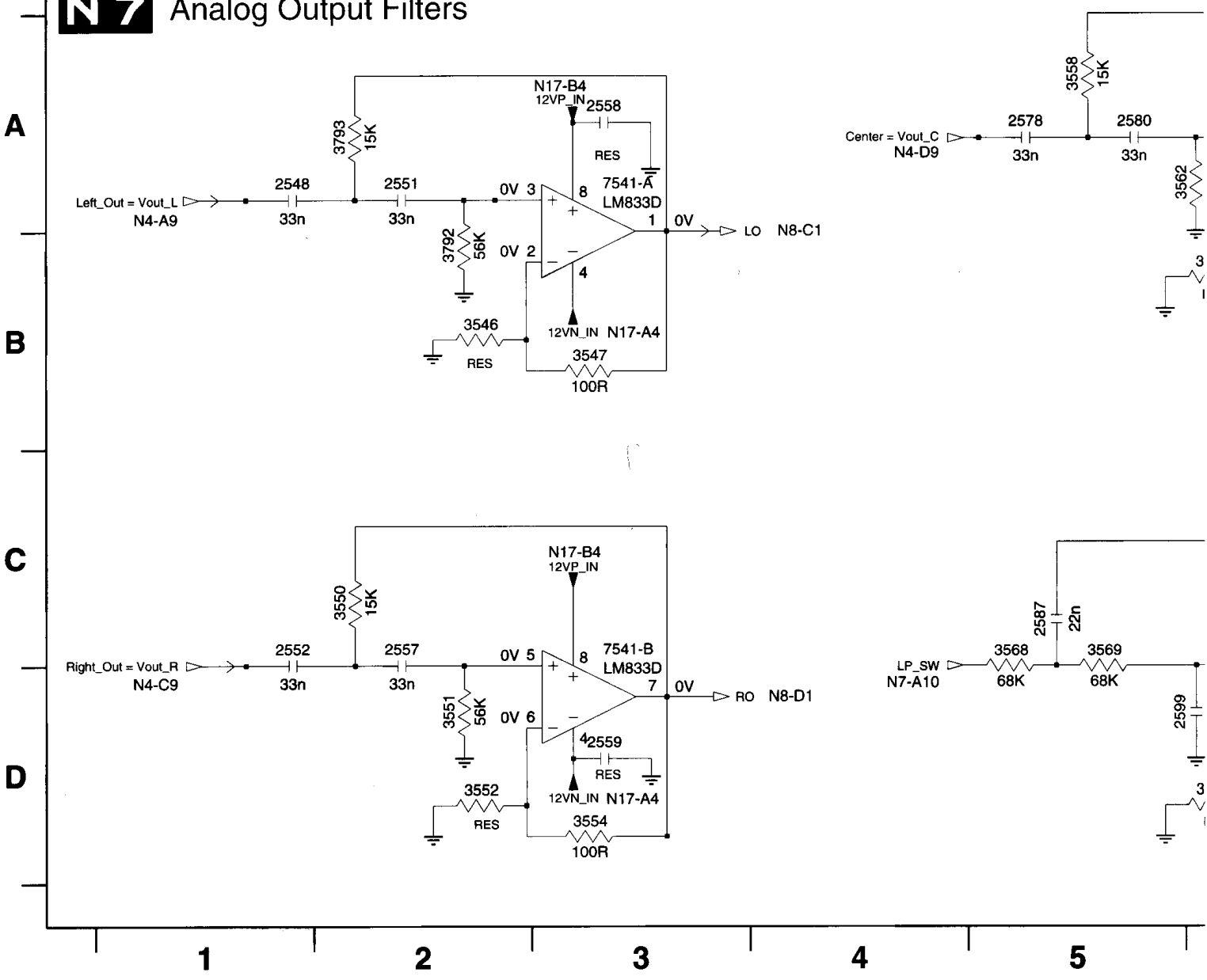
2540 C4
2541 D5
2542 C1
2543 C1
2545 C1
2546 D1
2549 C3
2553 C4
2555 B4
2556 D3
2560 D4
2562 D4
2563 B5
2564 D5
2565 B6
2566 E6
2567 C6
2568 E6
2569 D4
2740 A3
2741 A4
2743 A3
2744 F3
2745 B4
2746 E3
2747 E4
2749 F4
3541 D5
3543 C5
3553 B4
3556 C7
3557 B5
3559 C5
3560 D4
3561 C6
3563 D5
3564 E5
3565 E6
3580 D6
3581 F7
3585 B6
3740 B3
3741 B4
3742 A4
3743 B3
3744 B3
3745 B4
3746 E3
3747 E4
3748 E4
3749 F3
3750 F3
3751 F3
3758 B3
3759 E3
7540 C2
7565-A B6
7565-B D6
7740-A A3
7740-B E3

CL 96532042_019.eps
180599

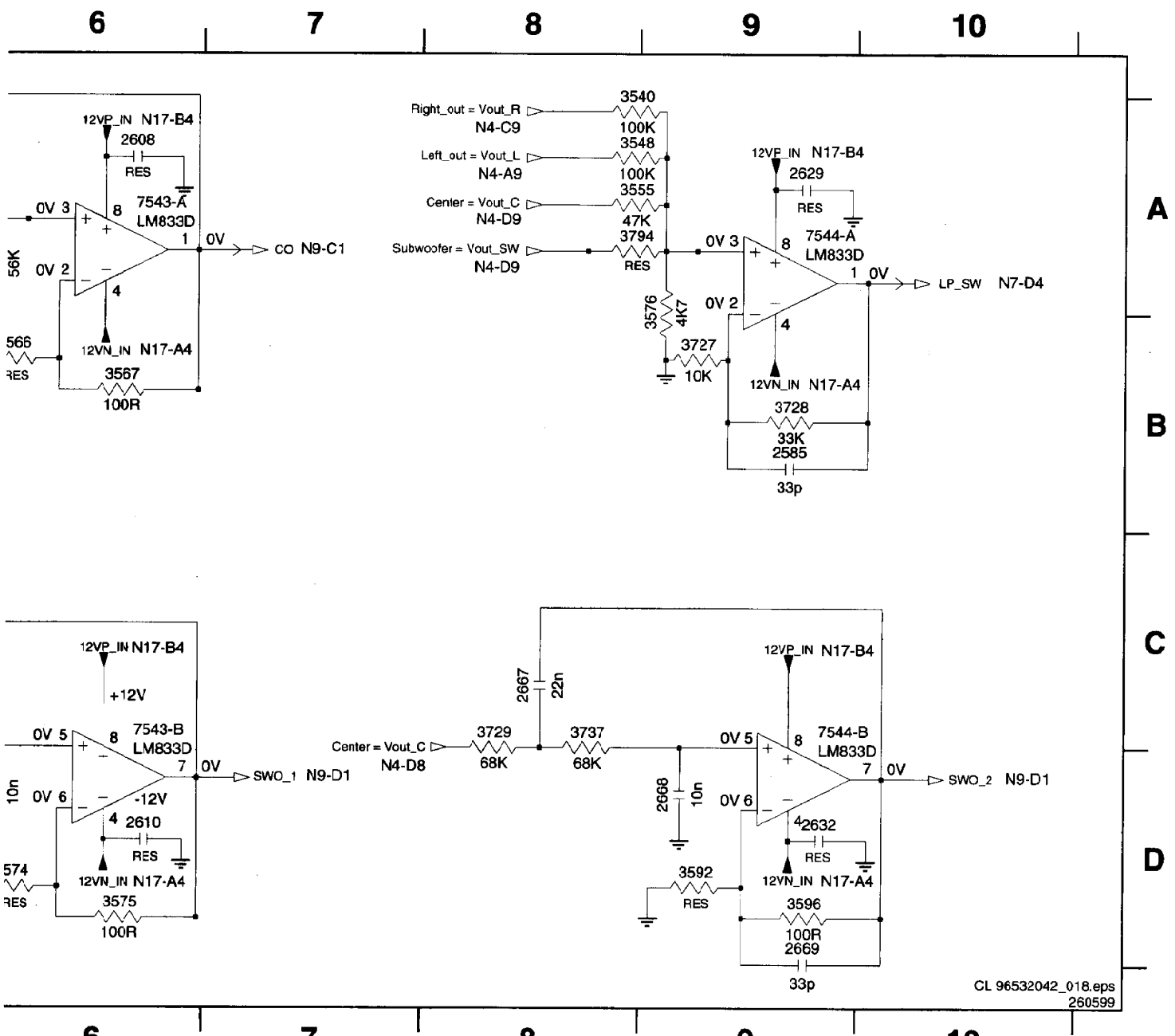
Multi-channel sound module

2548 A1	2557 C2	2578 A5	2587 C5	2610 D6	2667 C8	3540 A8	3548 A8	3552 D2	3558 A5	3567 B6
2551 A2	2558 A3	2580 A5	2599 D5	2629 A9	2668 D9	3546 B2	3550 C2	3554 D3	3562 A5	3568 C5
2552 C1	2559 D3	2585 B9	2608 A6	2632 D9	2669 D9	3547 B3	3551 D2	3555 A8	3566 B6	3569 C5

N 7 Analog Output Filters

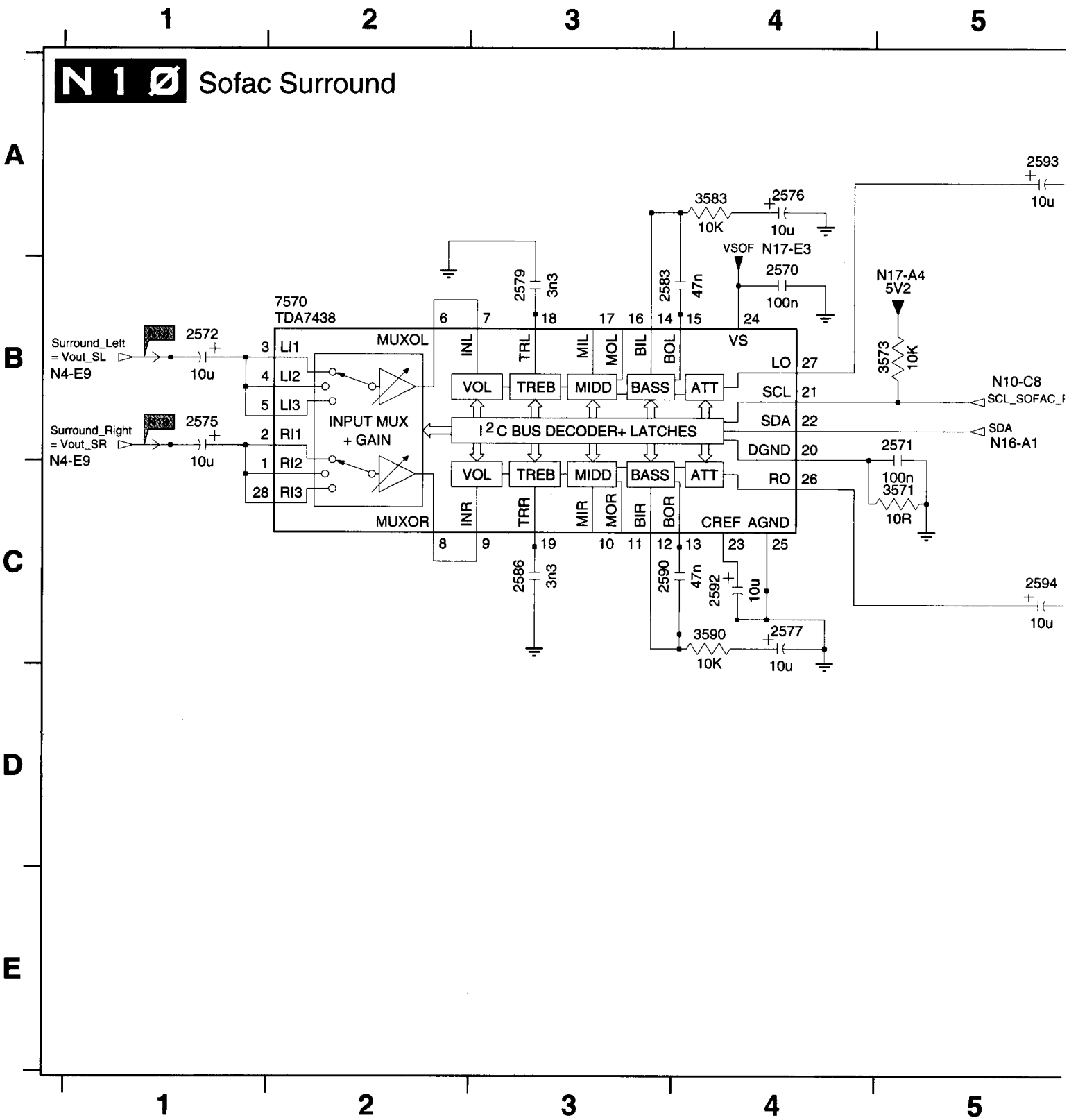


3574 D6	3592 D9	3728 B9	3792 B2	7541-A A3	7543-B C6
3575 D6	3596 D9	3729 C8	3793 A2	7541-B C3	7544-A A9
3576 A9	3727 B9	3737 C8	3794 A8	7543-A A6	7544-B C9

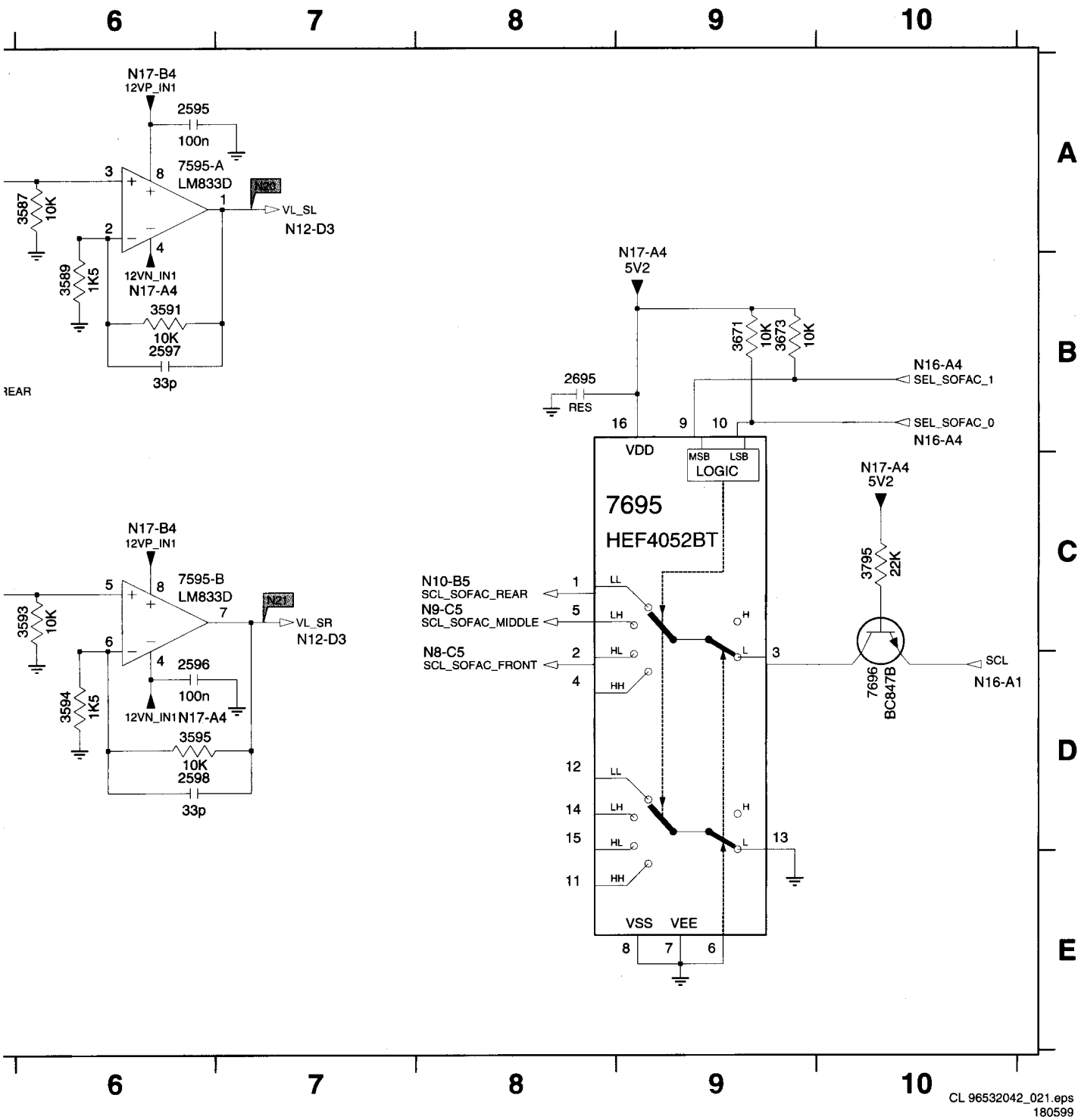


Multi-channel sound module

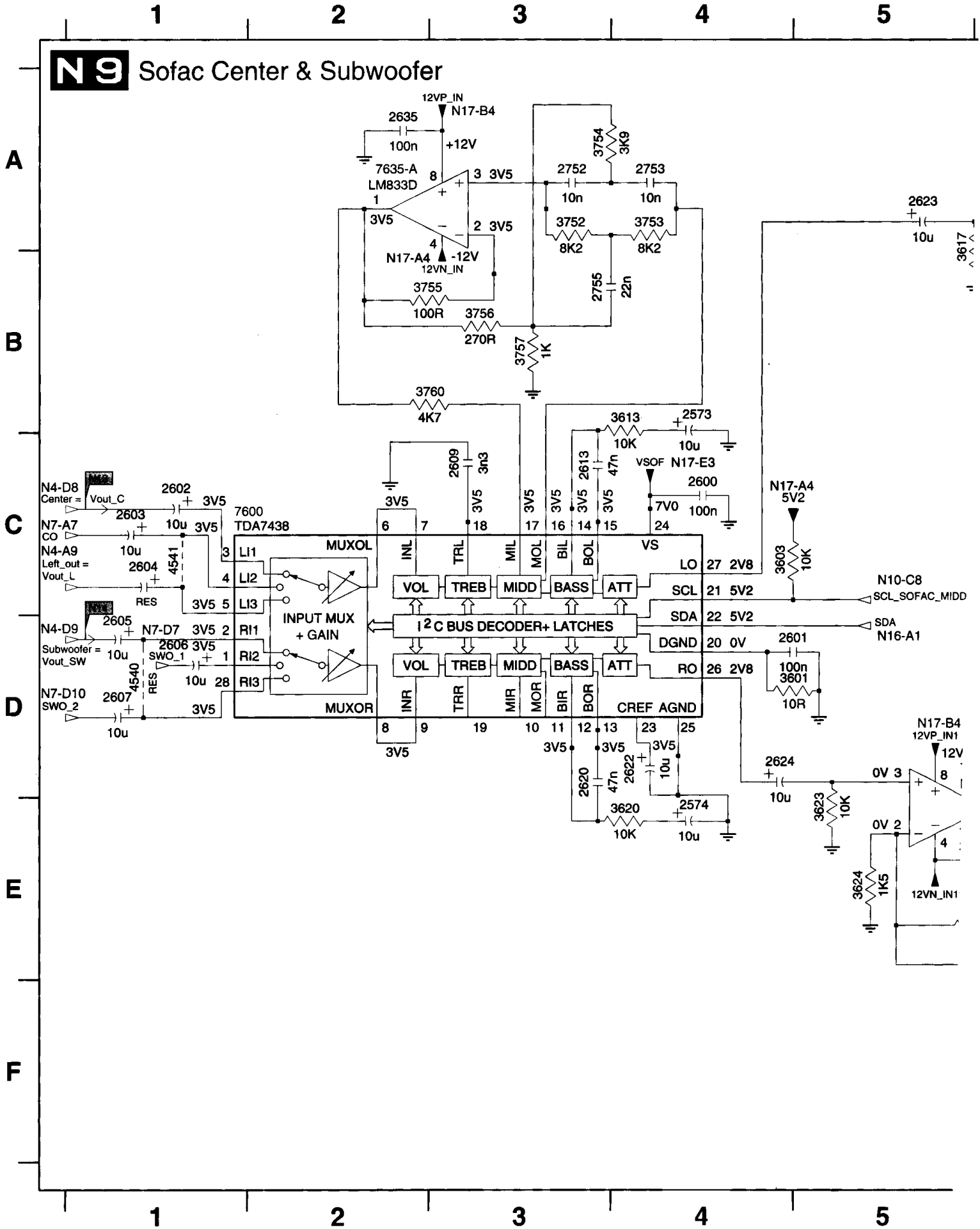
2570 B4 2572 B1 2576 A4 2579 B3 2586 C3 2592 C4 2594 C5 2596 D6 2598 D6 357
2571 B5 2575 B1 2577 C4 2583 B3 2590 C3 2593 A5 2595 A6 2597 B6 2695 B8 357

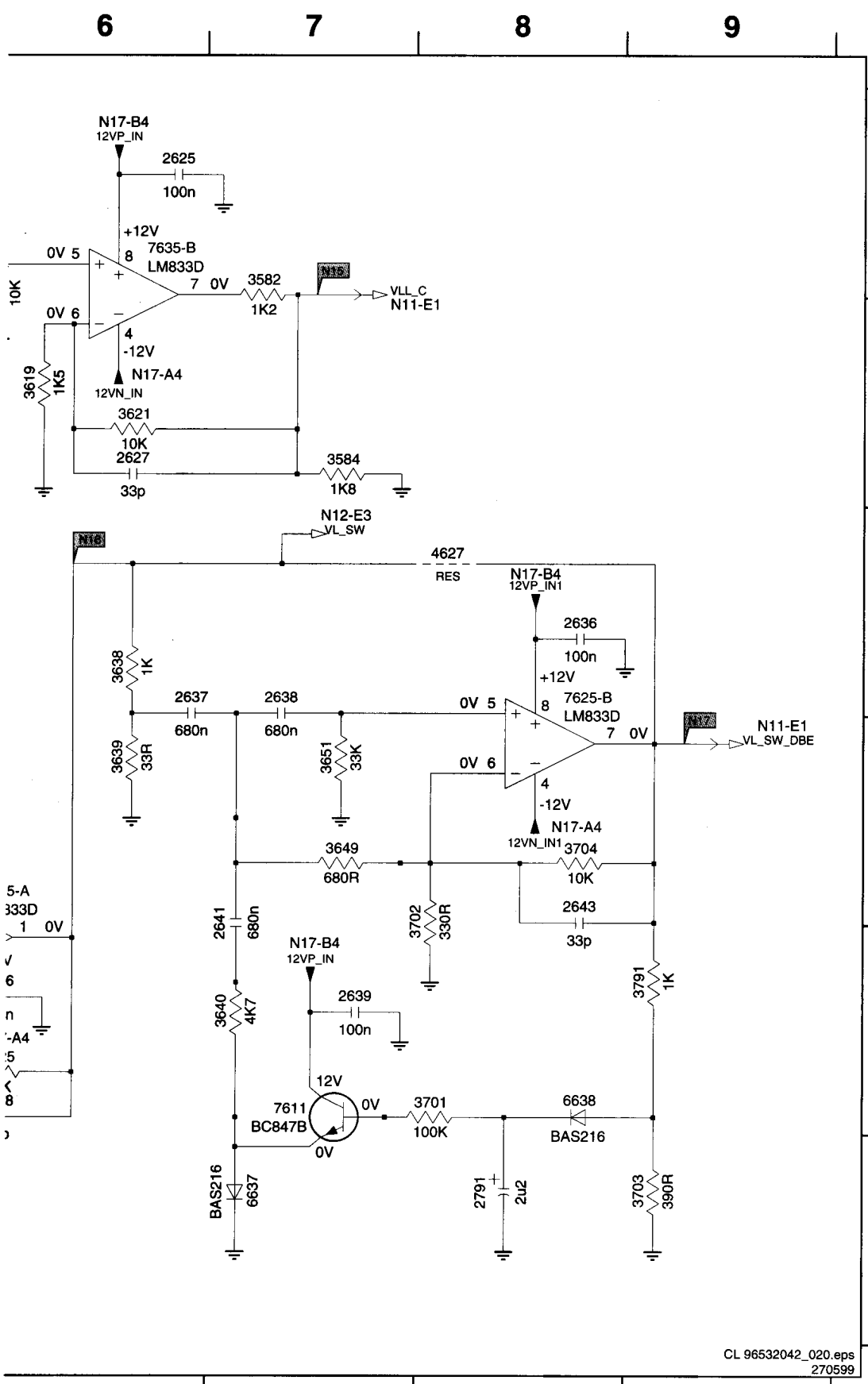


'1 C5	3583 A4	3589 B6	3591 B6	3594 D6	3671 B9	3795 C10	7595-A A6	7695 C8
'3 B5	3587 A6	3590 C4	3593 C6	3595 D6	3673 B9	7570 B2	7595-B C6	7696 D10



Multi-channel sound module

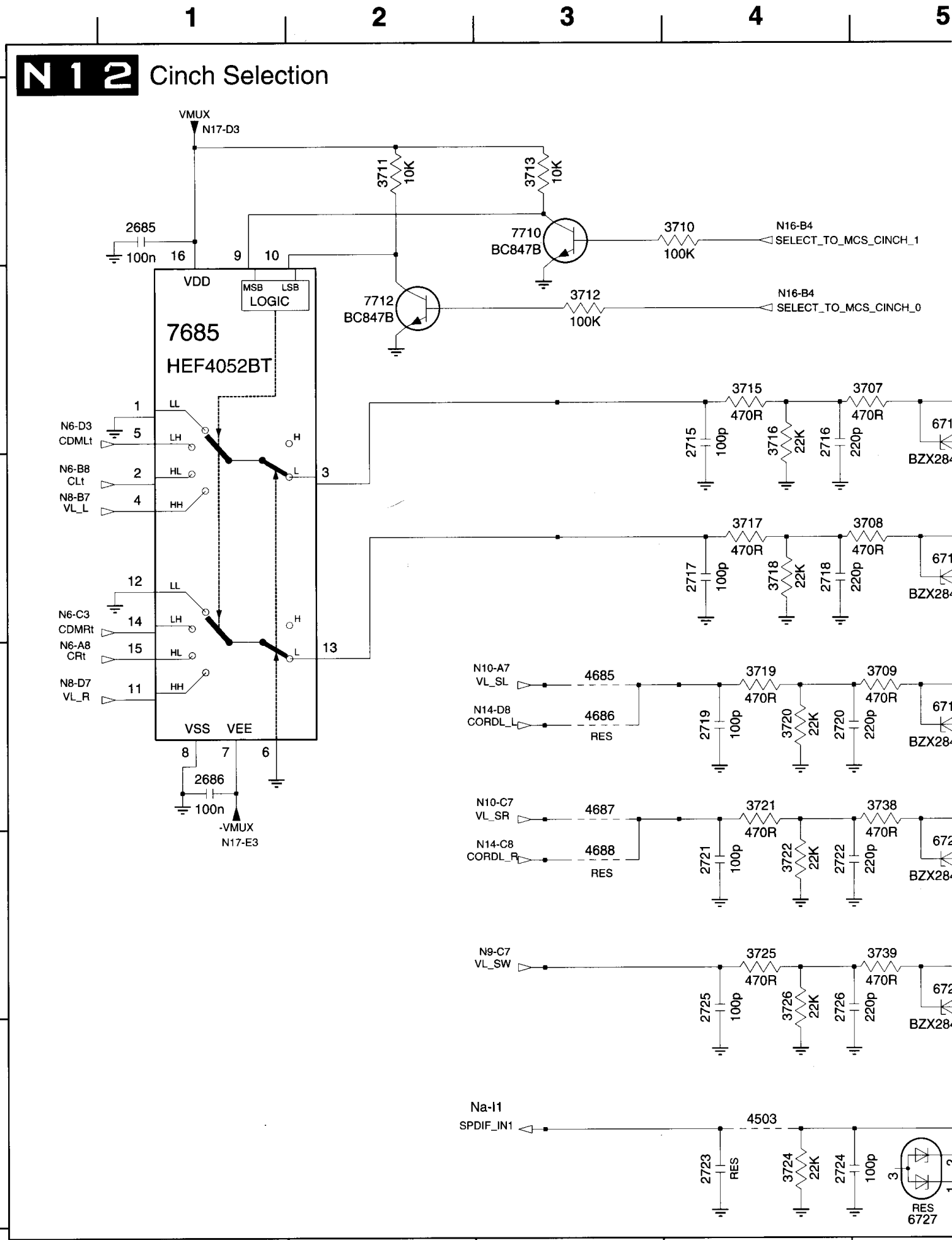


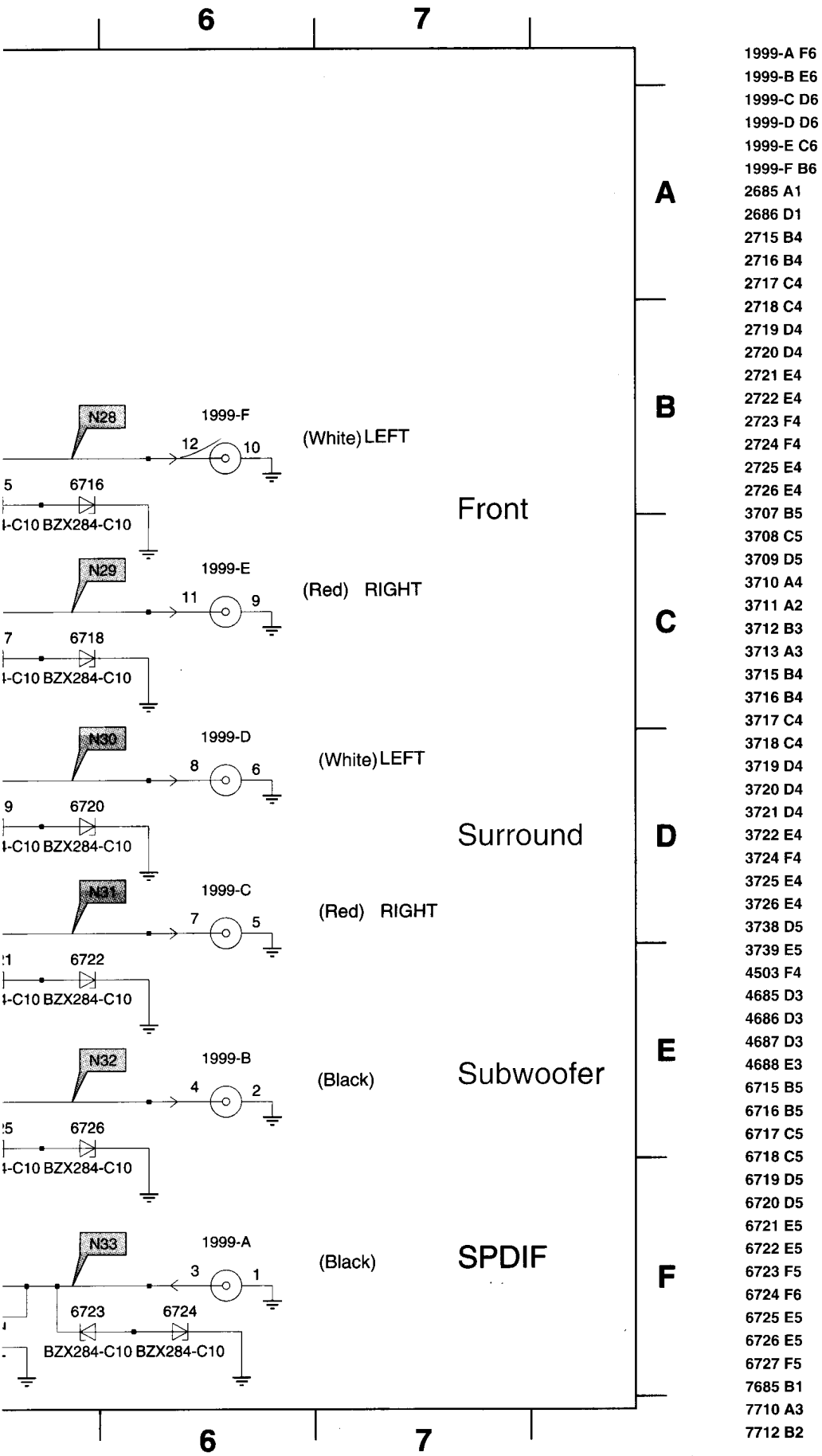


2573 B4
2574 E4
2600 C4
2601 D4
2602 C1
2603 C1
2604 C1
2605 D1
2606 D1
2607 D1
2609 C3
2613 C3
2620 D3
2622 D4
2623 A5
2624 D4
2625 A6
2626 E5
2627 B6
2628 E5
2635 A2
2636 C8
2637 C6
2638 C7
2639 E7
2641 D7
2643 D8
2752 A3
2753 A4
2755 B3
2791 F8
3582 A7
3584 B7
3601 D5
3603 C4
3613 B4
3617 A5
3619 B6
3620 E4
3621 B6
3623 E5
3624 E5
3625 E6
3638 C6
3639 D6
3640 E7
3649 D7
3651 D7
3701 E8
3702 D8
3703 F9
3704 D8
3752 A3
3753 A4
3754 A3
3755 B2
3756 B3
3757 B3
3760 B3
3791 E9

4540 D1
4541 C1
4627 C8
6637 F7
6638 E8
7600 C1
7611 E7
7625-A D5
7625-B C8
7635-A A2
7635-B A6

Multi-channel sound module



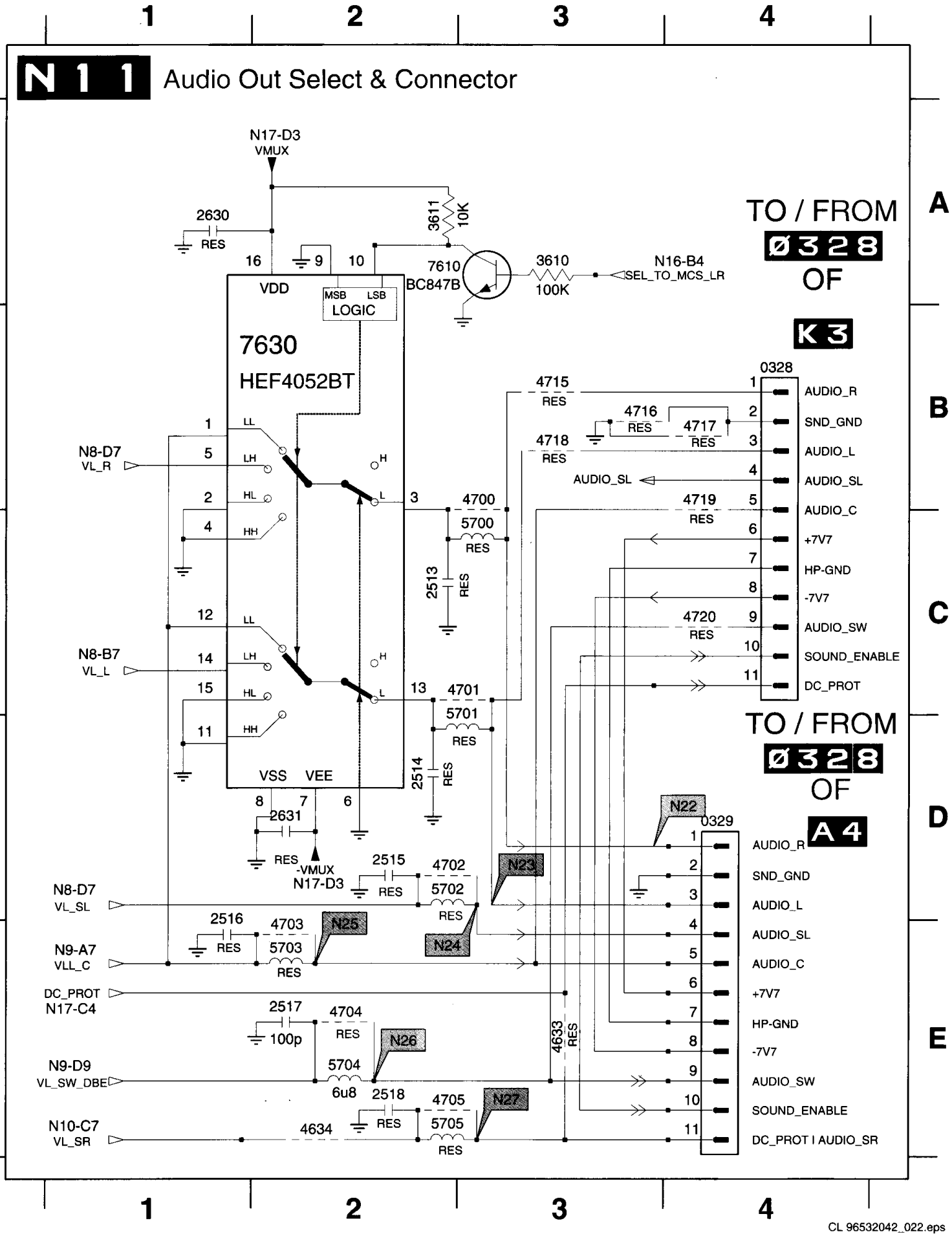


1999-A F6
1999-B E6
1999-C D6
1999-D D6
1999-E C6
1999-F B6
2685 A1
2686 D1
2715 B4
2716 B4
2717 C4
2718 C4
2719 D4
2720 D4
2721 E4
2722 E4
2723 F4
2724 F4
2725 E4
2726 E4
3707 B5
3708 C5
3709 D5
3710 A4
3711 A2
3712 B3
3713 A3
3715 B4
3716 B4
3717 C4
3718 C4
3719 D4
3720 D4
3721 D4
3722 E4
3724 F4
3725 E4
3726 E4
3738 D5
3739 E5
4503 F4
4685 D3
4686 D3
4687 D3
4688 E3
6715 B5
6716 B5
6717 C5
6718 C5
6719 D5
6720 D5
6721 E5
6722 E5
6723 F5
6724 F6
6725 E5
6726 E5
6727 F5
7685 B1
7710 A3
7712 B2

CL 96532042_023.eps
180599

Multi-channel sound module

0328 B4	2514 D2	2517 E2	2631 D2	4633 E3	4701 C3	4704 E2	4716 B3	4719 B4	5701 D3	5704 E2	7630 B1
0329 D4	2515 D2	2518 E2	3610 A3	4634 E2	4702 D2	4705 E2	4717 B4	4720 C4	5702 D2	5705 E2	
2513 C2	2516 E1	2630 A1	3611 A2	4700 B3	4703 E2	4715 B3	4718 B3	5700 C3	5703 E2	7610 A3	



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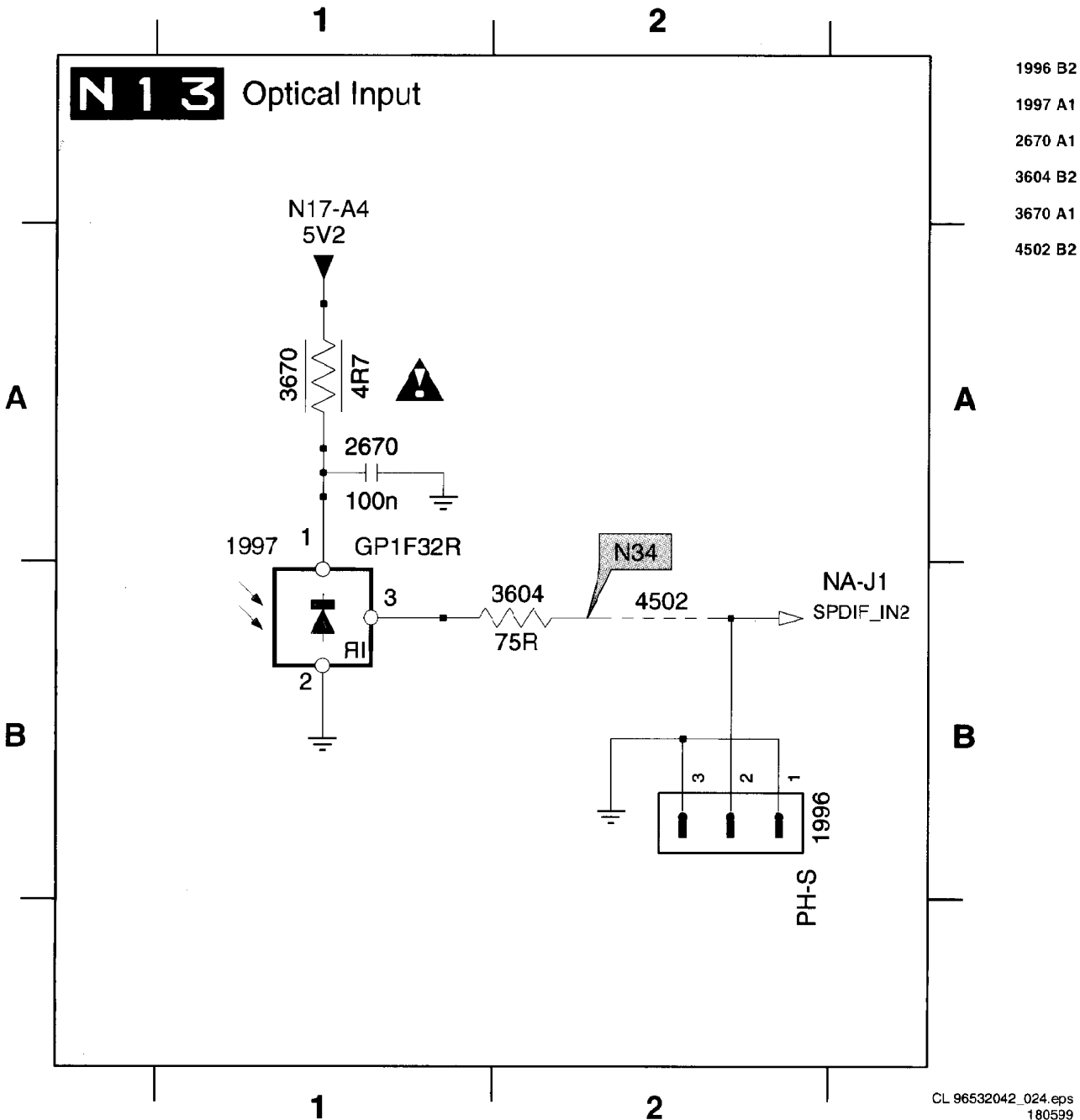
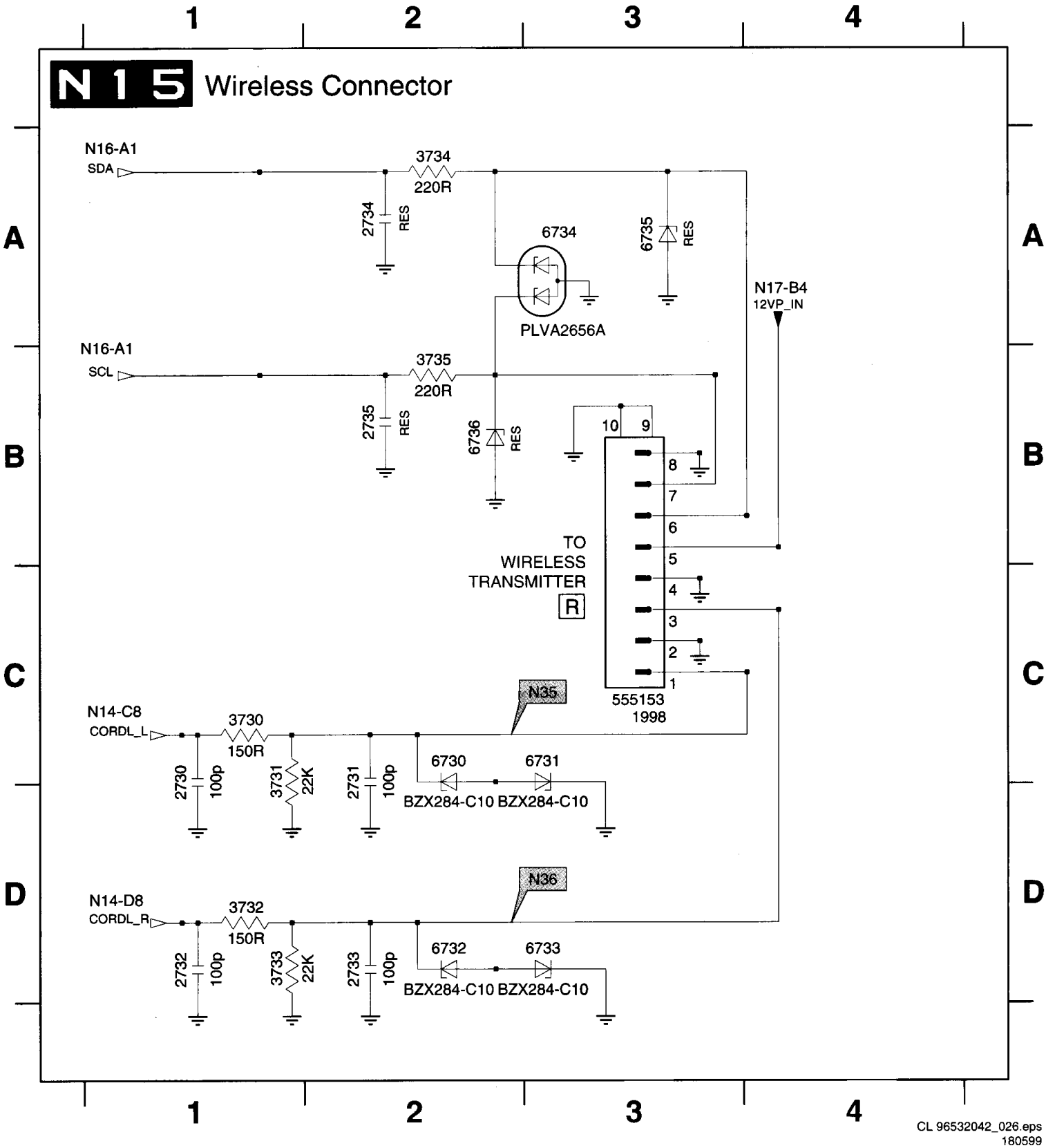

1
2
N 1 3 Optical Input
1996 B2
1997 A1
2670 A1
3604 B2
3670 A1
4502 B2
N17-A4
5V2
3670
4R7
2670
100n
1997
1
GP1F32R
3
RII
2
N34
3604
75R
4502
NA-J1
SPDIF_IN2
A
B
3
2
1
1996
PH-S
CL 96532042_024.eps
180599

Multi-channel sound module

1998 C3	2731 C2	2733 D2	2735 B2	3731 C1	3733 D1	3735 B2	6731 C3	6733 D3	6735 A3
2730 C1	2732 D1	2734 A2	3730 C1	3732 D1	3734 A2	6730 C2	6732 D2	6734 A3	6736 B2



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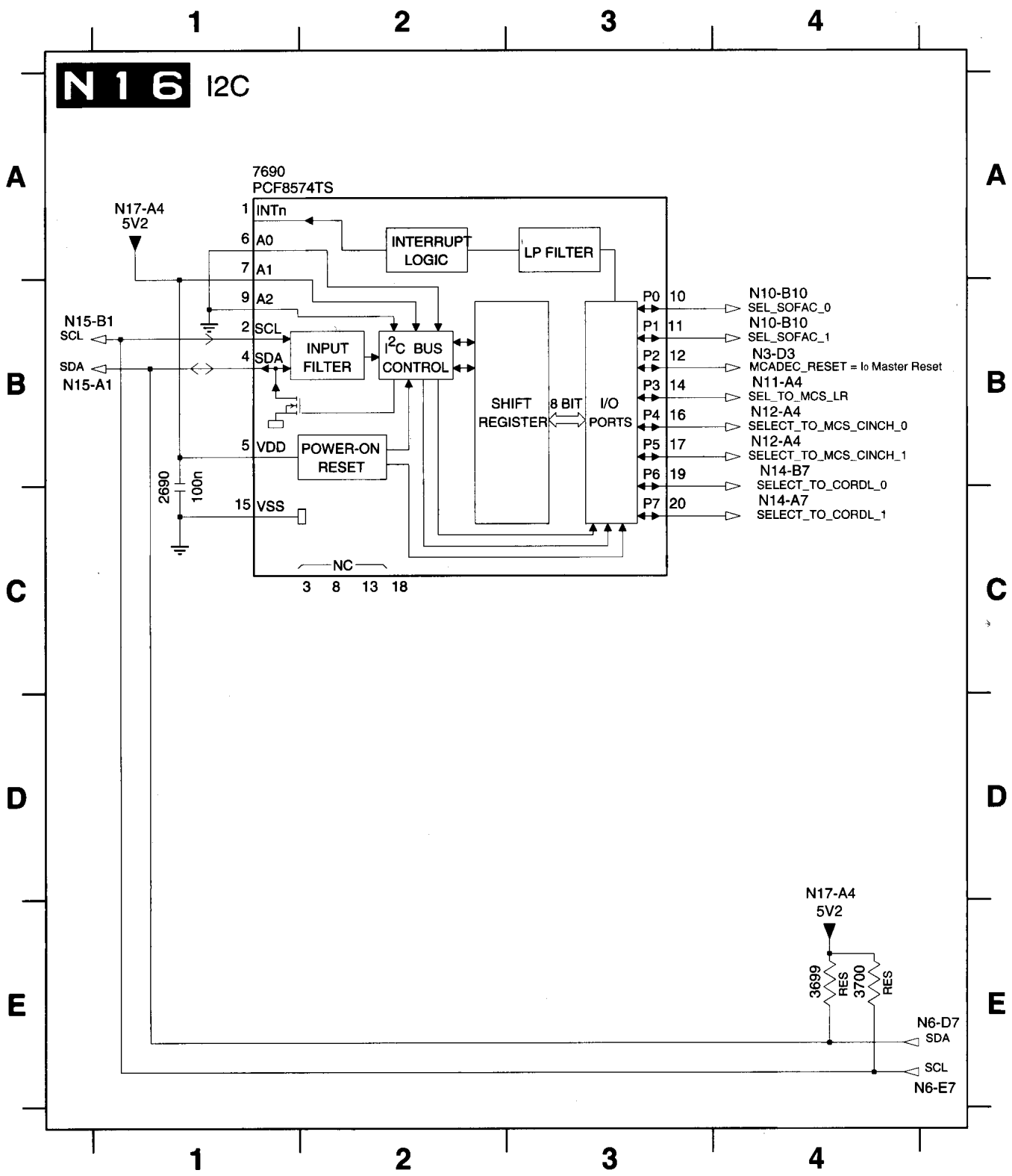
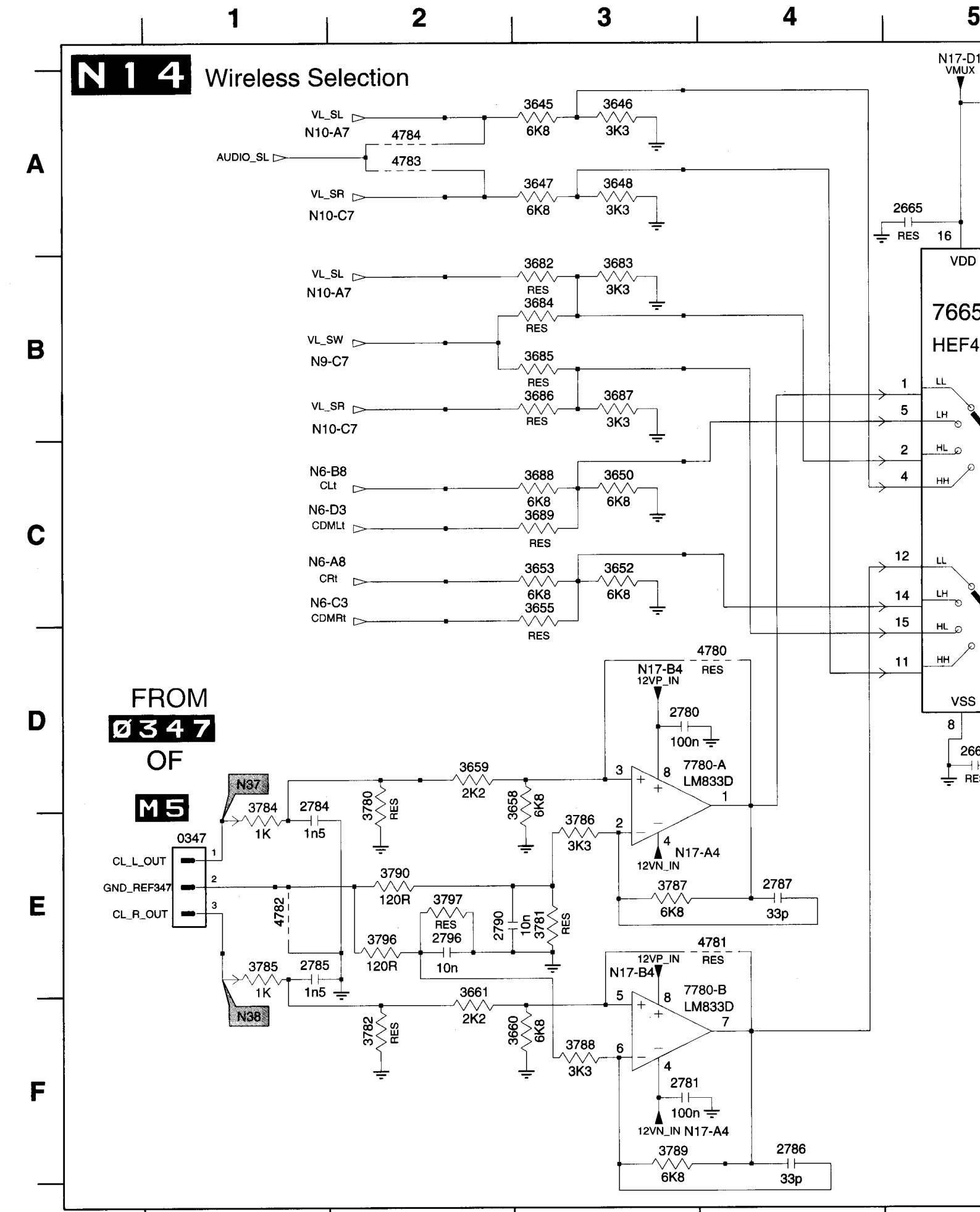
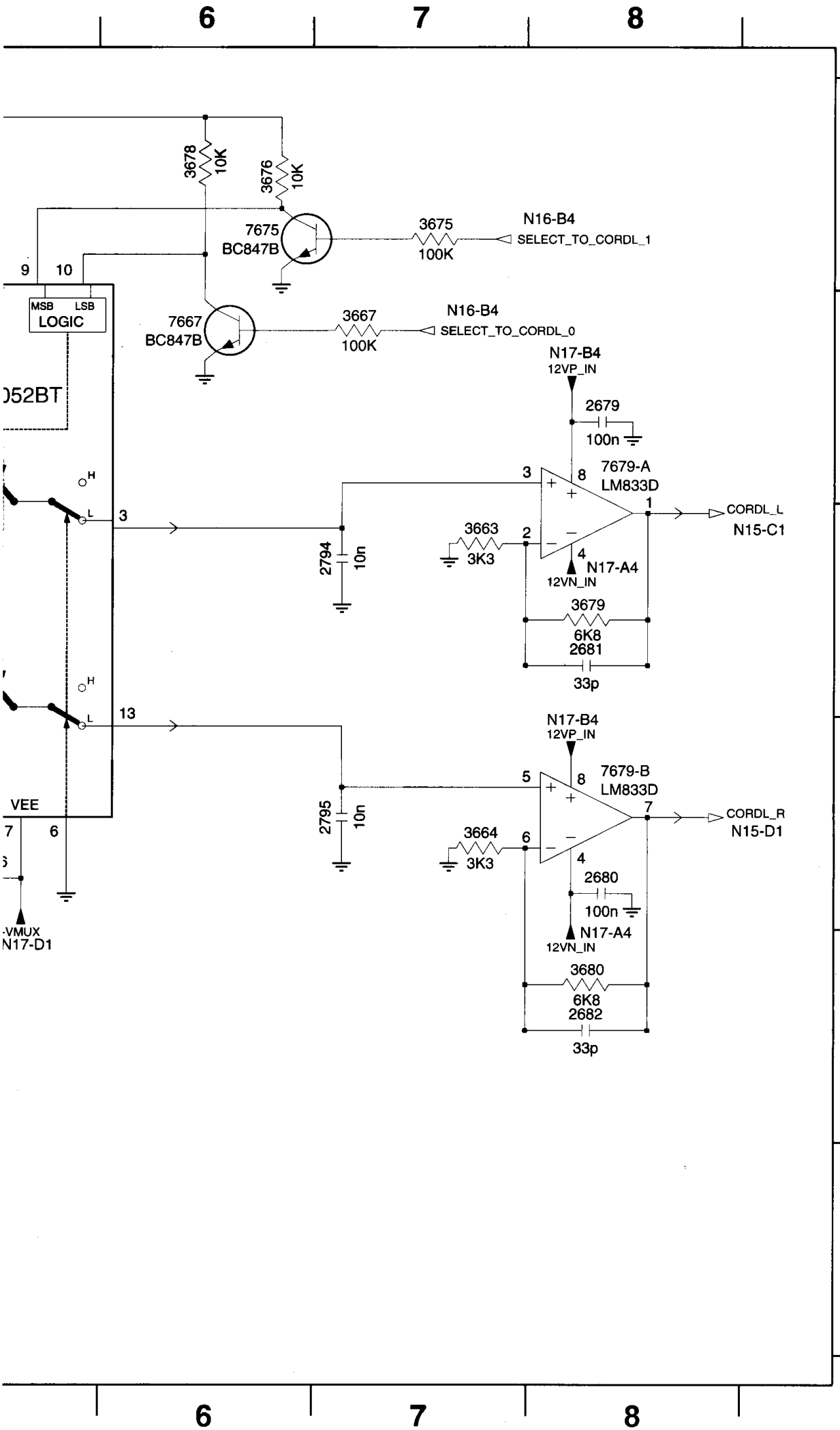
2690 B1 3699 E4 3700 E4 7690 A1



Multi-channel sound module

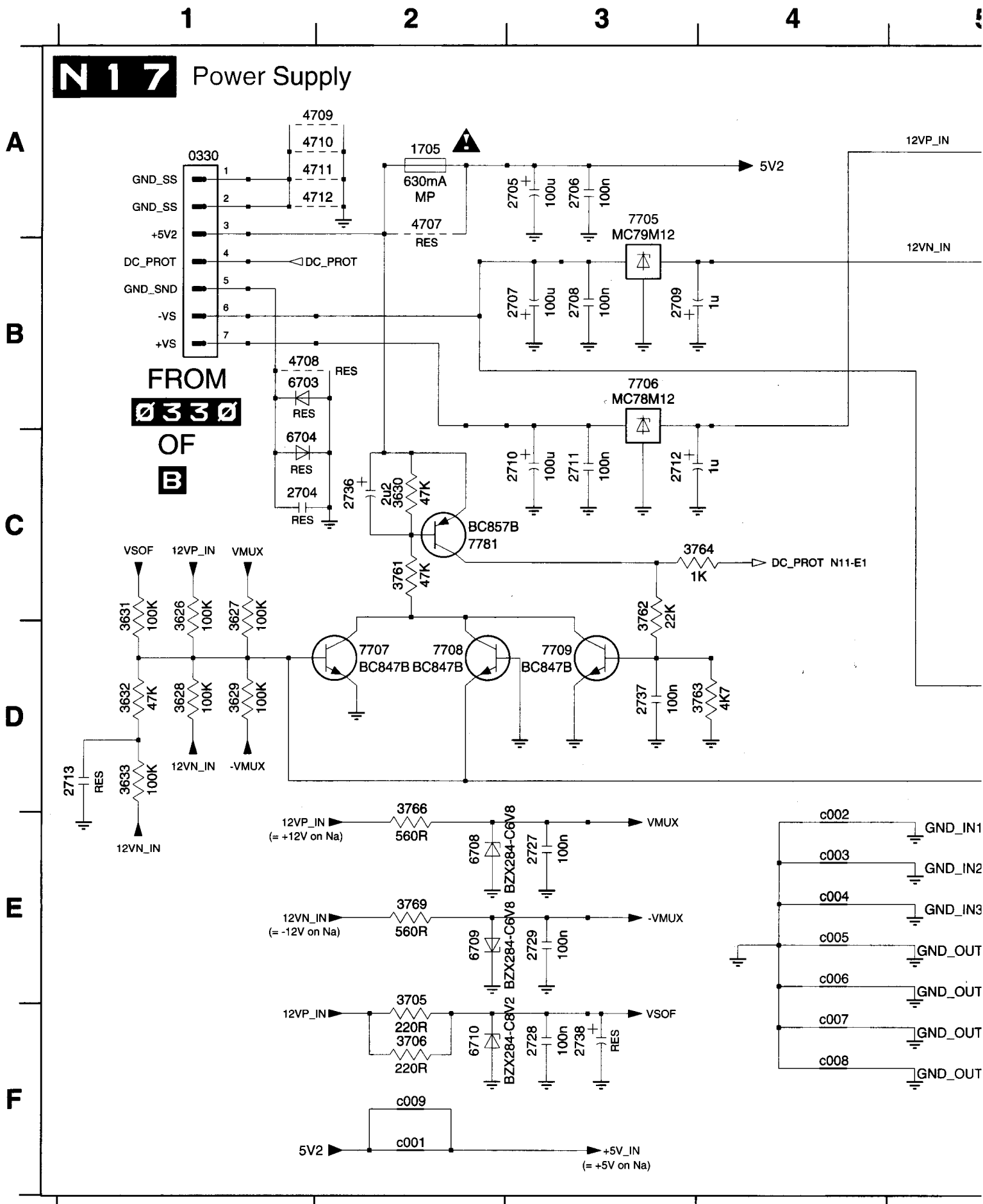


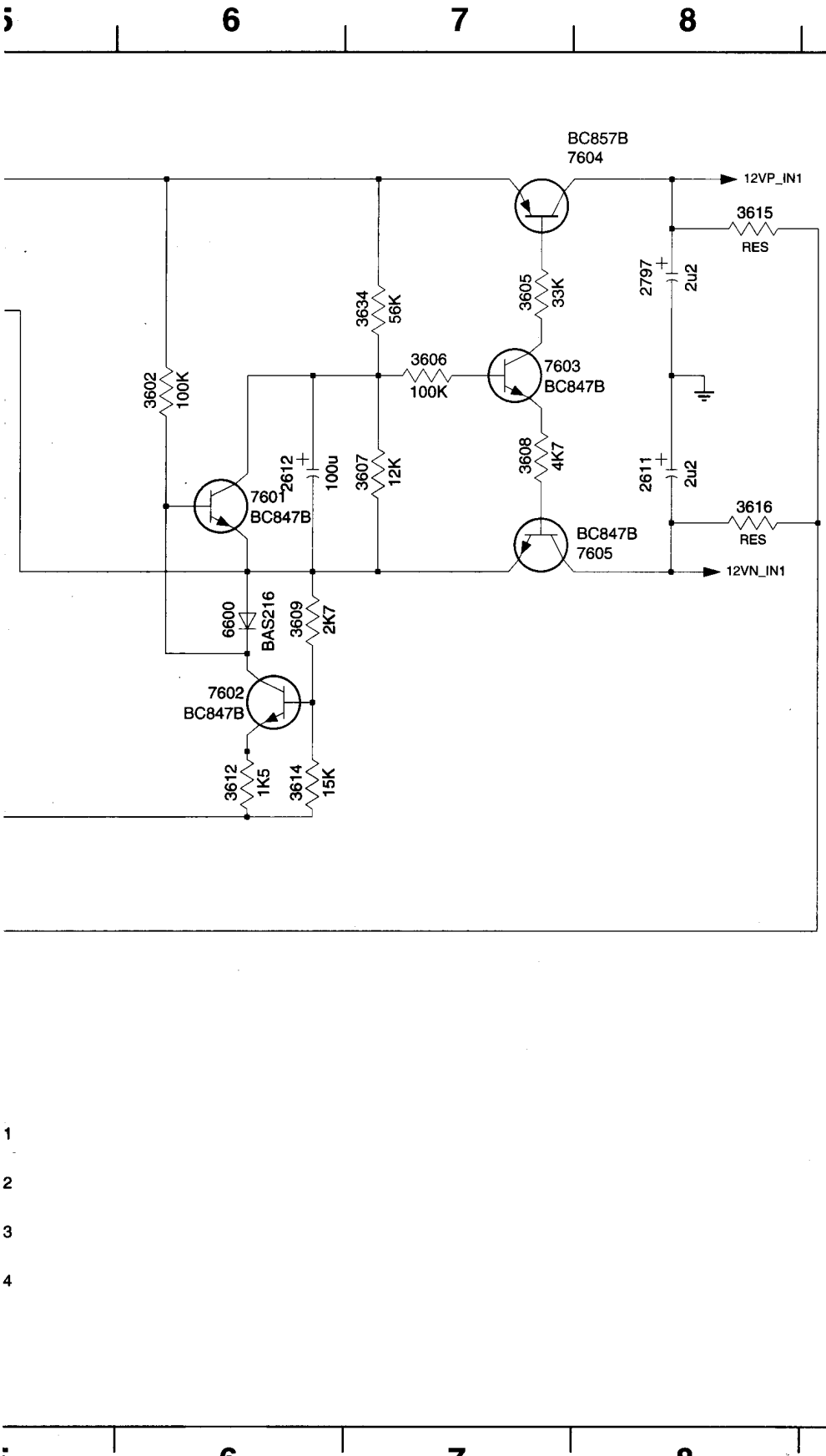


0347 E1
2665 A5
2666 D5
2679 B8
2680 D8
2681 C8
2682 E8
2780 D3
2781 F3
2784 D1
2785 E1
2786 F4
2787 E4
2790 E2
2794 C7
2795 D7
2796 E2
3645 A3
3646 A3
3647 A3
3648 A3
3650 C3
3652 C3
3653 C3
3655 C3
3658 D3
3659 D2
3660 F3
3661 E2
3663 C7
3664 D7
3667 B7
3675 A7
3676 A6
3678 A6
3679 C8
3680 E8
3682 B3
3683 B3
3684 B3
3685 B3
3686 B3
3687 B3
3688 C3
3689 C3
3780 D2
3781 E3
3782 F2
3784 D1
3785 E1
3786 E3
3787 E3
3788 F3
3789 F3
3790 E2
3796 E2
3797 E2
4780 D4
4781 E4
4782 E1
4783 A2
4784 A2
7665 B5
7667 B6
7675 A6
7679-A B8
7679-B D8
7780-A D3
7780-B E3

CL 96532042_025.eps
180599

Multi-channel sound module

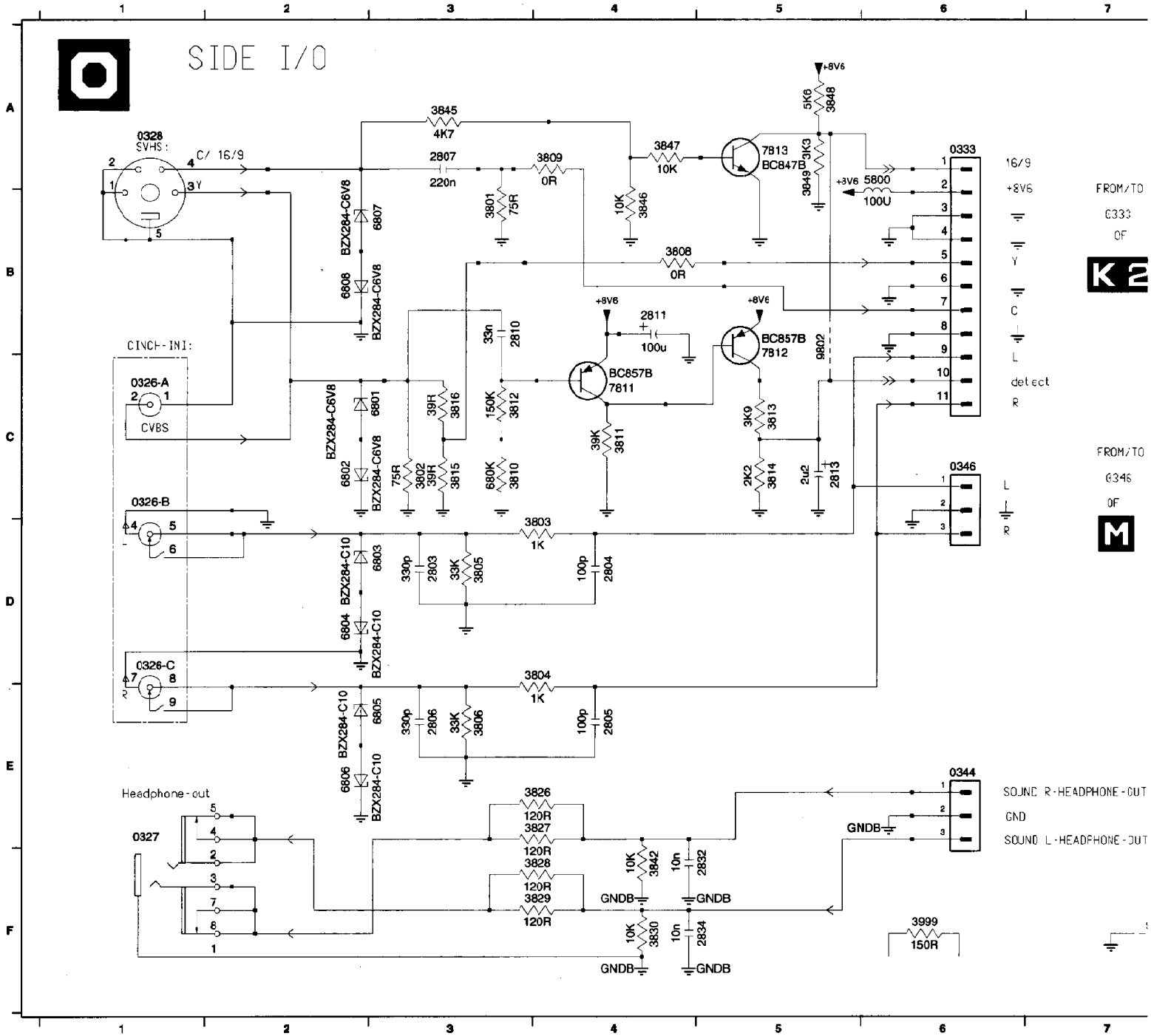




0330 A1 6709 E2
1705 A2 6710 F2
2611 B8 7601 B6
2612 B6 7602 C6
2704 C1 7603 B7
2705 A3 7604 A8
2706 A3 7605 C8
2707 B3 7705 A3
2708 B3 7706 B3
2709 B3 7707 D2
2710 C3 7708 D2
2711 C3 7709 D3
2712 C3 7781 C2
2713 D1 c001 F2
2727 E3 c002 E4
2728 F3 c003 E4
2729 E3 c004 E4
2736 C2 c005 E4
2737 D3 c006 E4
2738 F3 c007 F4
2797 A8 c008 F4
3602 B6 c009 F2
3605 B7
3606 B7
3607 B7
3608 B7
3609 C6
3612 D6
3614 D6
3615 A8
3616 C8
3626 C1
3627 C1
3628 D1
3629 D1
3630 C2
3631 C1
3632 D1
3633 D1
3634 B7
3705 F2
3706 F2
3761 C2
3762 C3
3763 D4
3764 C4
3766 E2
3769 E2
4707 A2
4708 B1
4709 A2
4710 A2
4711 A2
4712 A2
6600 C6
6703 B1
6704 C1
6708 E2

CL 96532042_028.eps
180599

Side I/O


SIDE I/O
0328
SVHS:
C/ 16/9
Y
CINCH-IN1:
0326-A
CVBS
0326-B
0326-C
Headphone-out
0327
0333
0346
0344
16/9
+8V6
Y
C
L
detect
R
FROM/TO
G333
OF
K2
FROM/TO
G346
OF
M
SOUND R-HEADPHONE-OUT
GND
SOUND L-HEADPHONE-OUT
GNDB
BC857B
7811
BC857B
7812
7813
BC847B
3845
4K7
2807
220n
3809
0R
3847
10K
3848
5K6
3808
0R
2811
100u
5800
100U
3803
1K
3804
1K
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120R
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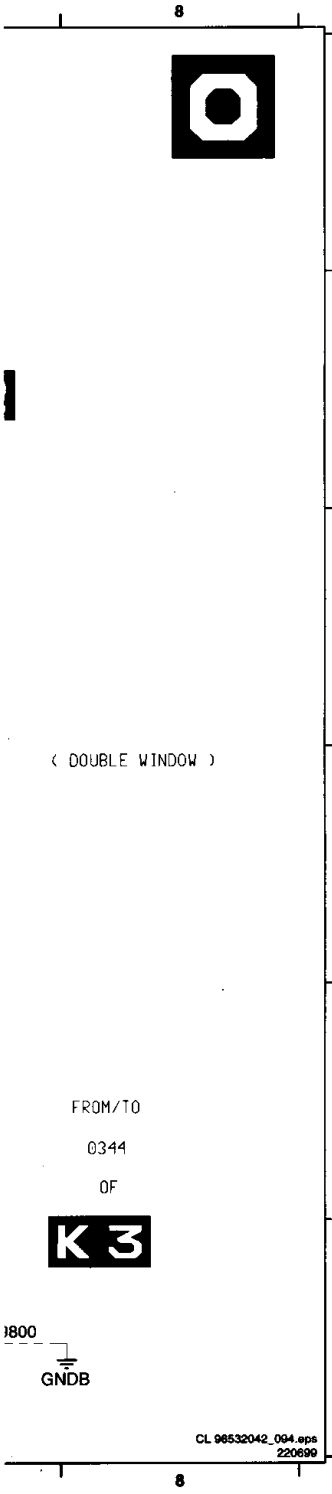
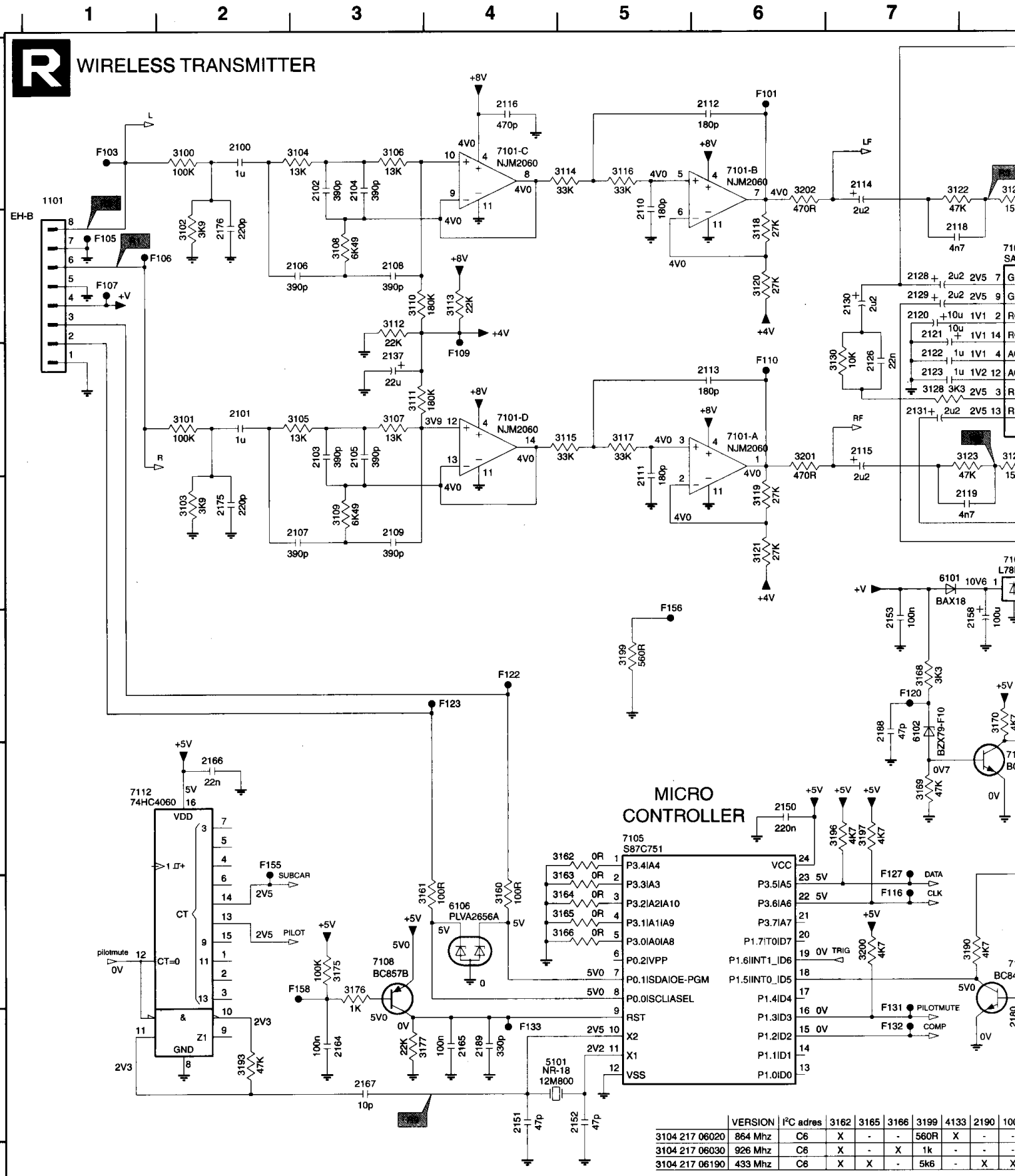
BZX284-C6V8
BZX284-C10



0326-A C1 9800 F7
0326-B C1 9802 B5
0326-C D1
0327 E1
0328 A1
A 0333 A6
0344 E6
0346 C6
2803 D3
2804 D4
2805 E4
2806 E3
2807 A3
2810 B3
2811 B4
B 2813 C5
2832 F5
2834 F5
3801 B3
3802 C3
3803 D4
3804 D4
3805 D3
3806 E3
C 3808 B4
3809 A4
3810 C3
3811 C4
3812 C3
3813 C5
3814 C5
3815 C3
3816 C3
D 3826 E4
3827 E4
3828 F4
3829 F4
3830 F4
3842 F4
3845 A3
3846 B4
3847 A4
3848 A5
E 3849 A5
3999 F6
5800 A6
6801 C3
6802 C2
6803 D3
6804 D2
6805 E3
6806 E2
F 6807 B3
6808 B2
7811 C4
7812 B5
7813 A5

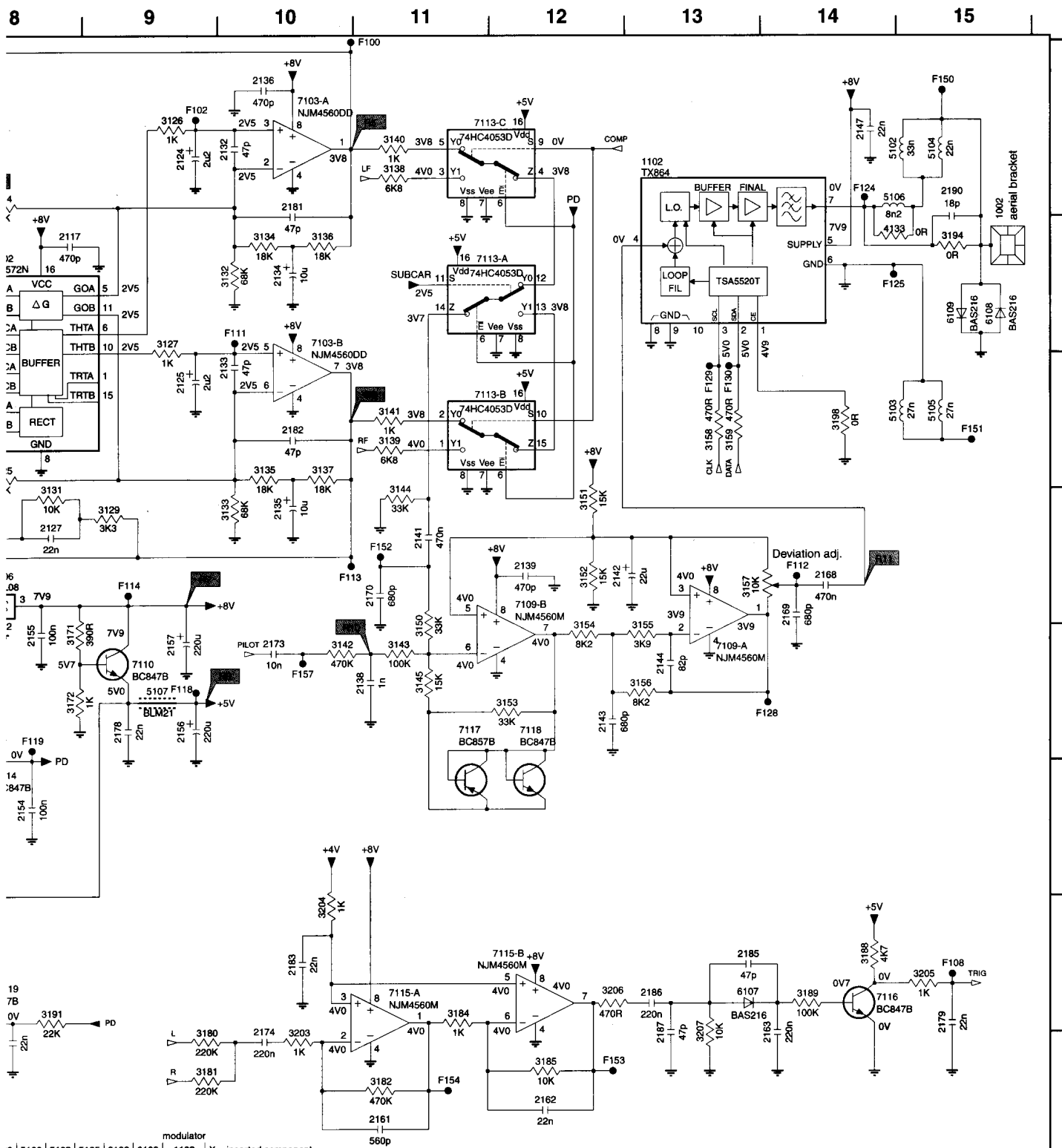
Wireless surround transmitter

1002 A15	2106 B3	2115 C7	2124 A9	2133 C10	2143 E12	2156 E9	2167 H3	2179 G15	2189 H4	3107 C3	3116 A5	3125 C8	3134 B10	31
1101 A1	2107 D3	2116 A4	2125 C9	2134 B10	2144 E13	2157 E9	2168 D14	2180 H8	2190 A15	3108 B3	3117 C5	3126 A9	3135 C10	31
1102 A13	2108 B3	2117 B8	2126 C7	2135 D10	2147 A14	2158 E8	2169 D14	2181 A10	3100 A2	3109 D3	3118 B6	3127 B9	3136 B10	31
2100 A2	2109 D3	2118 B7	2127 D8	2136 A10	2150 F6	2161 H11	2170 D11	2182 C10	3101 C2	3110 B3	3119 D6	3128 C7	3137 C10	31
2101 C2	2110 B5	2119 D8	2128 B7	2137 C3	2151 H4	2162 H12	2173 E10	2183 G10	3102 B2	3111 C3	3120 B6	3129 D9	3138 A11	31
2102 A3	2111 D5	2120 B7	2129 B7	2138 E11	2152 H5	2163 H14	2174 H10	2185 G13	3103 D2	3112 B3	3121 D6	3130 C7	3139 C11	31
2103 C3	2112 A6	2121 B7	2130 B7	2139 D12	2153 E7	2164 H3	2175 D2	2186 G13	3104 A3	3113 B4	3122 A7	3131 D8	3140 A11	31
2104 A3	2113 C6	2122 C7	2131 C7	2141 D11	2154 F8	2165 H4	2176 B2	2187 H13	3105 C3	3114 A5	3123 C8	3132 B10	3141 C11	31
2105 C3	2114 A7	2123 C7	2132 A10	2142 D12	2155 E8	2166 F2	2178 E9	2188 E7	3106 A3	3115 C5	3124 A8	3133 D10	3142 E10	31



	VERSION	I²C adres	3162	3165	3166	3199	4133	2190	100
3104 217 06020	864 Mhz	C6	X	-	-	560R	X	-	-
3104 217 06030	926 Mhz	C6	X	-	X	1k	-	-	-
3104 217 06190	433 Mhz	C6	X	X	-	5k6	-	X	X

3 E11	3156 E13	3165 G5	3177 H3	3191 G8	3202 A6	5103 C14	6108 B15	7105 F5	7113-C A12	F101 A6	F111 B10	F123 E4	F133 H4	F158 G3	
4 D11	3157 D13	3166 G5	3180 H9	3193 H2	3203 H10	5104 A15	6109 B15	7106 D8	7114 F8	F102 A9	F112 D14	F124 A14	F150 A15		
5 E11	3158 C13	3168 E7	3181 H9	3194 B15	3204 G10	5105 C15	7101-A C6	7108 G3	7115-A G11	F103 A1	F113 D10	F125 B14	F151 C15		
0 E11	3159 C13	3169 F7	3182 H11	3196 F7	3205 G15	5106 A14	7101-B A6	7109-A E13	7115-B G12	F105 B1	F114 D9	F127 G7	F152 D11		
1 D12	3160 G4	3170 E8	3184 G11	3197 F7	3206 G12	5107 E9	7101-C A4	7109-B D12	7116 G14	F106 B2	F116 G7	F128 E14	F153 H12		
2 D12	3161 G4	3171 E8	3185 H12	3198 C14	3207 H13	6101 D7	7101-D C4	7110 E9	7117 E11	F107 B1	F118 E9	F129 C13	F154 H11		
3 E12	3162 F5	3172 E8	3188 G14	3199 E5	4133 B14	6102 E7	7102 B8	7112 F1	7118 E12	F108 G15	F119 E8	F130 C13	F155 F2		
4 E12	3163 G5	3175 G3	3189 G14	3200 G7	5101 H4	6106 G4	7103-A A10	7113-A B12	7119 G8	F109 C4	F120 E7	F131 H7	F156 E5		
5 E13	3164 G5	3176 G3	3190 G8	3201 C6	5102 A14	6107 G13	7103-B B10	7113-B C12	F100 A11	F110 C6	F122 E4	F132 H7	F157 E10		



modulator	5106	5102	5105	6108	6109	1102
	-	33nH	27nH	-	-	TX864B
	6n8	22nH	33nH	-	-	TX926
	-	X	X	X	X	TX433

X = inserted component
value = this value to be used

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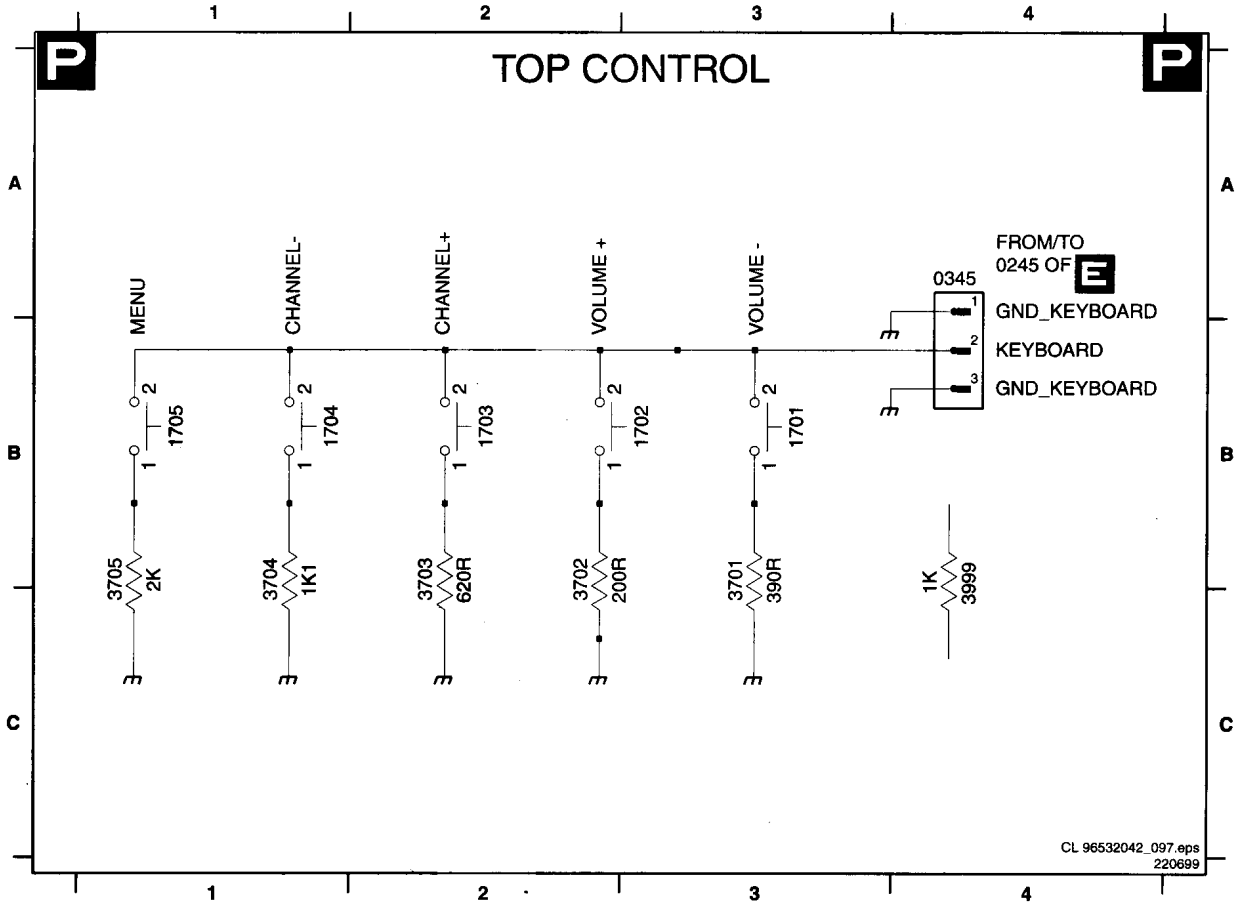
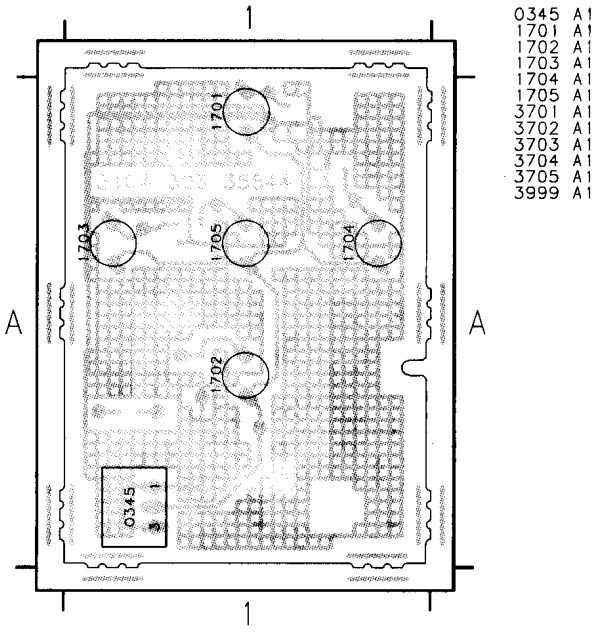
Top Control

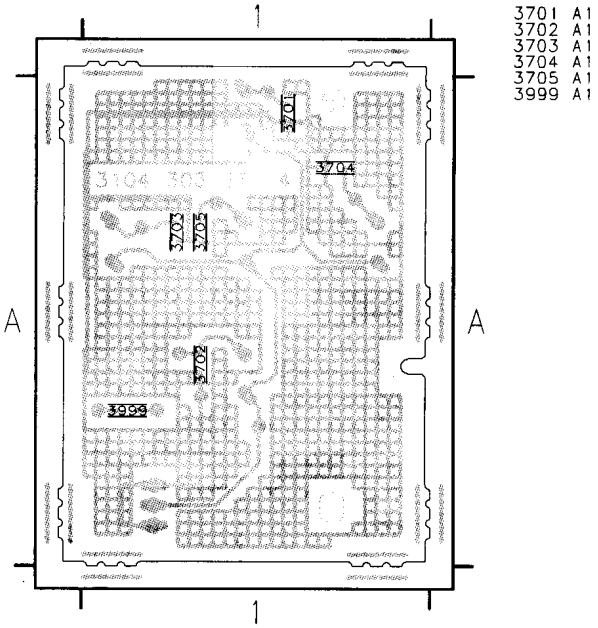
0345 A4 1702 B3 1704 B1 3701 B3 3703 B2 3705 B1
1701 B3 1703 B2 1705 B1 3702 B2 3704 B1 3999 B4



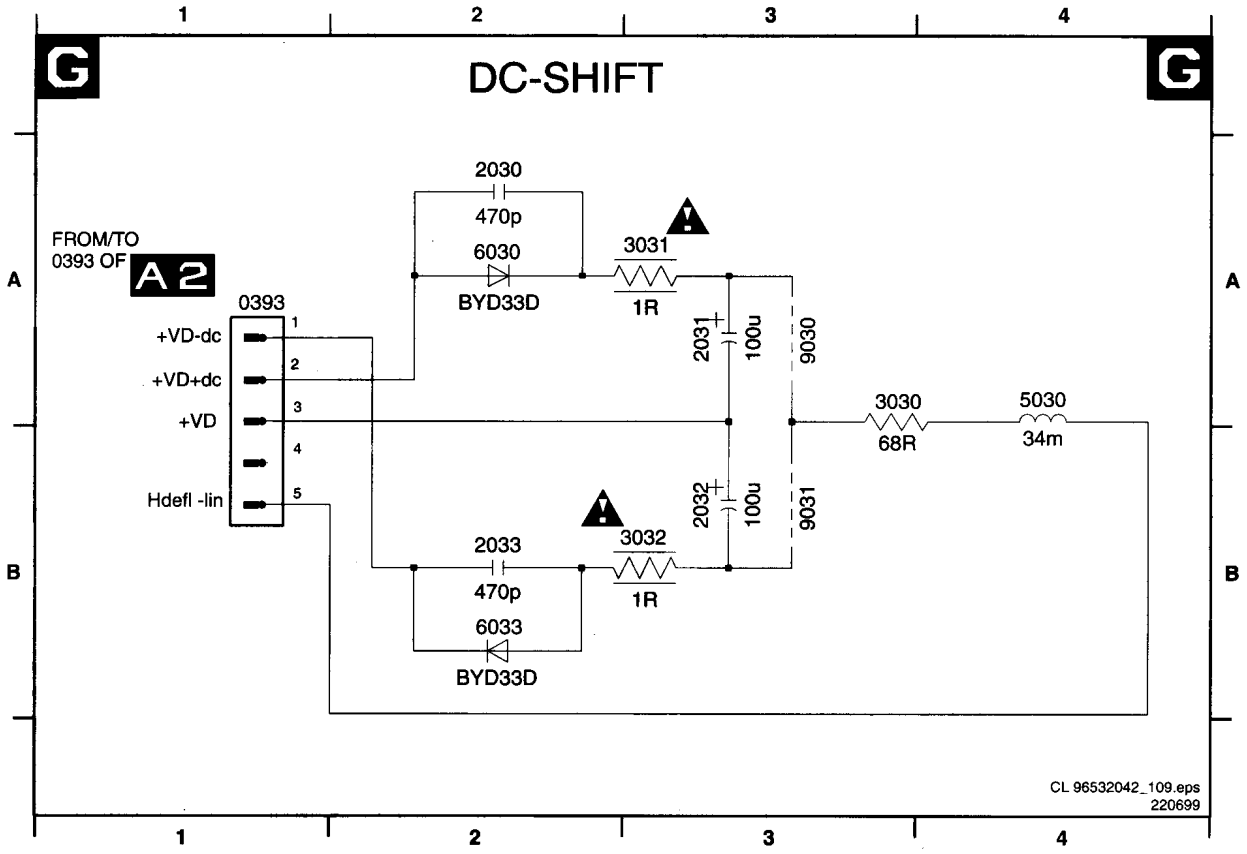
Componentside



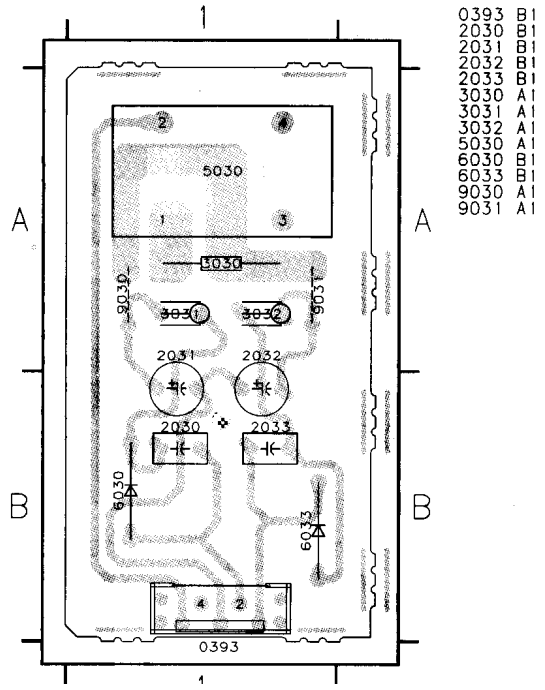
Copperside



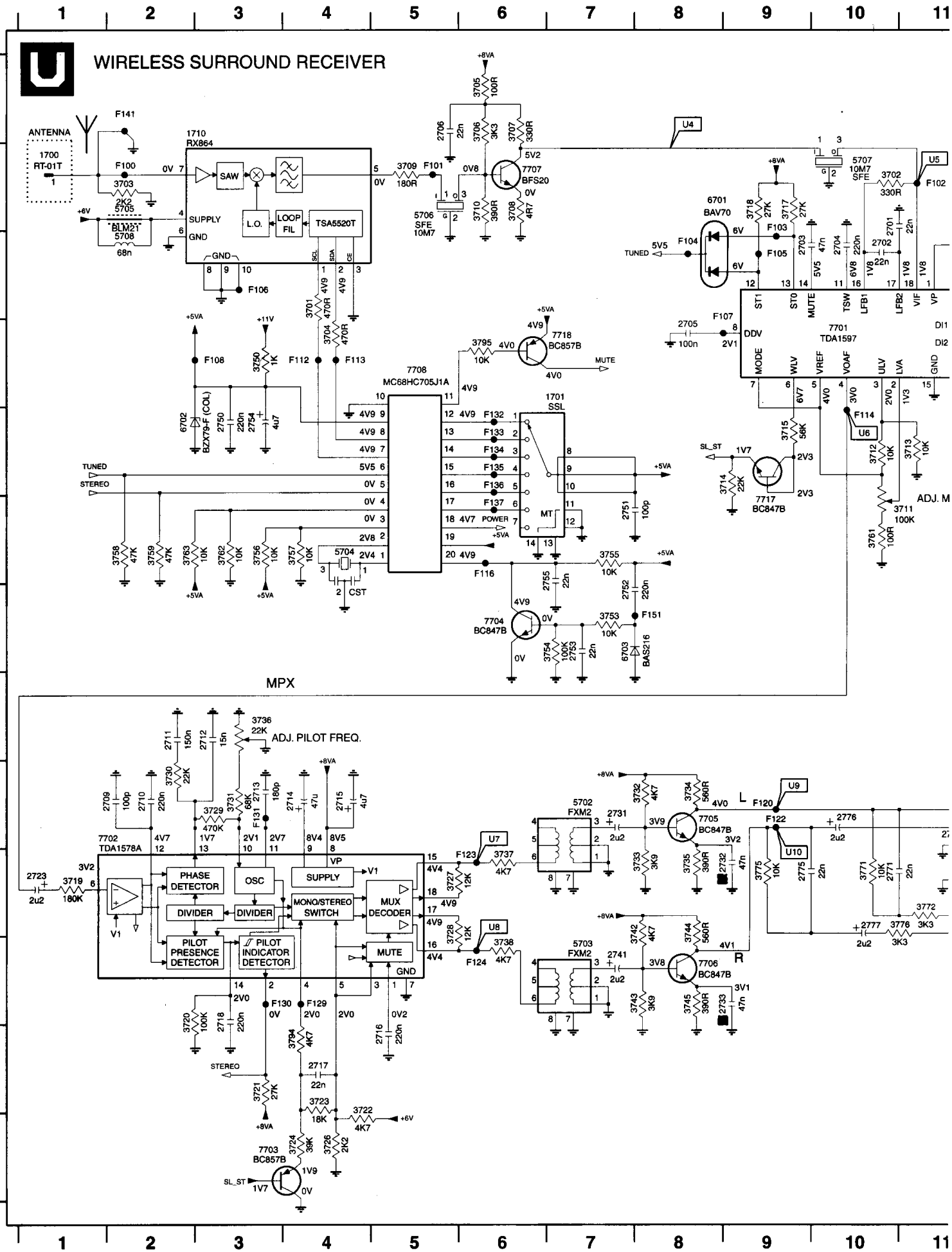
0393 A1 2031 A3 2033 B2 3031 A3 5030 A4 6033 B2 9031 B3
2030 A2 2032 B3 3030 A3 3032 B3 6030 A2 9030 A3

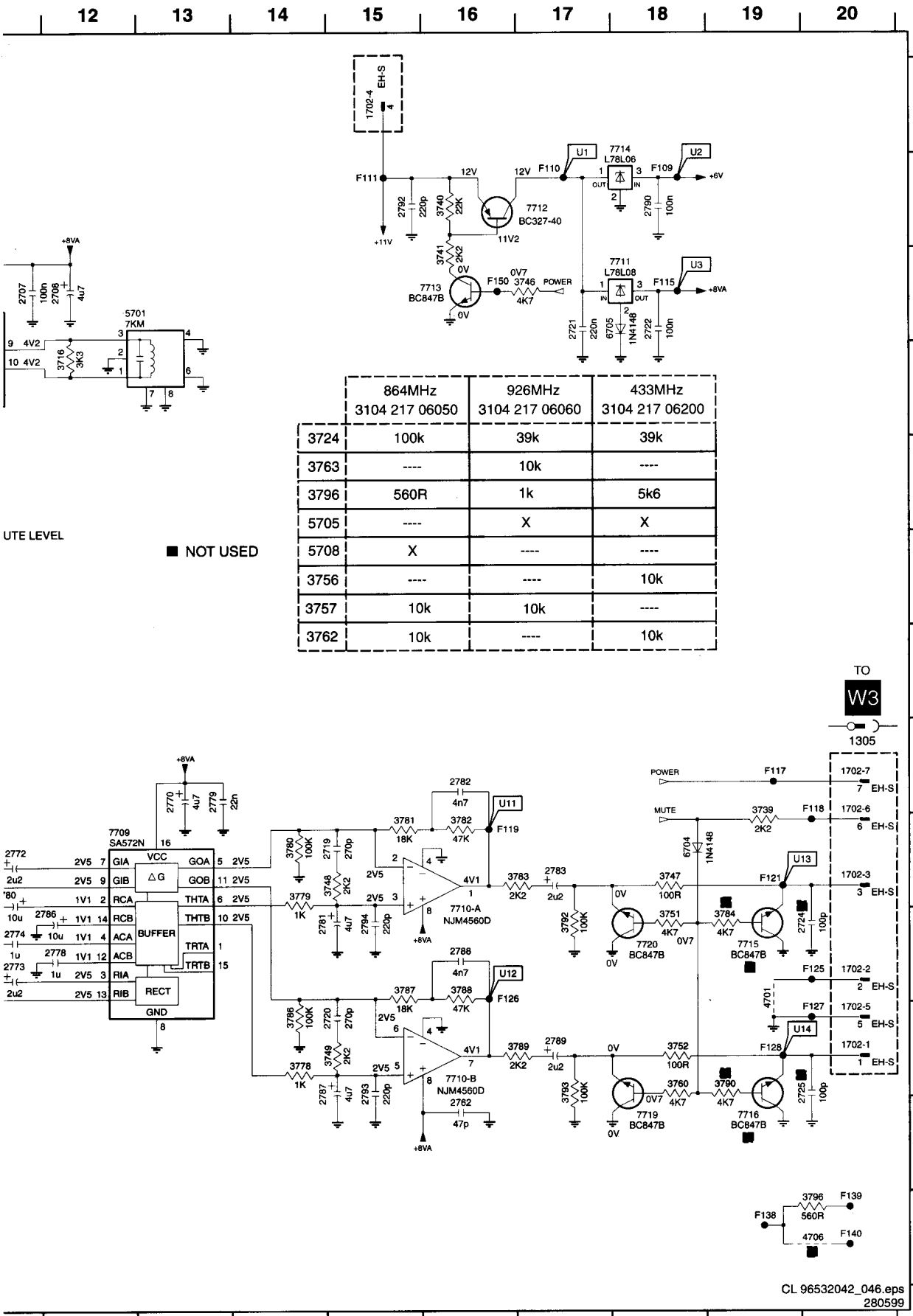


DC-Shift (componentside)



Wreless surround receiver

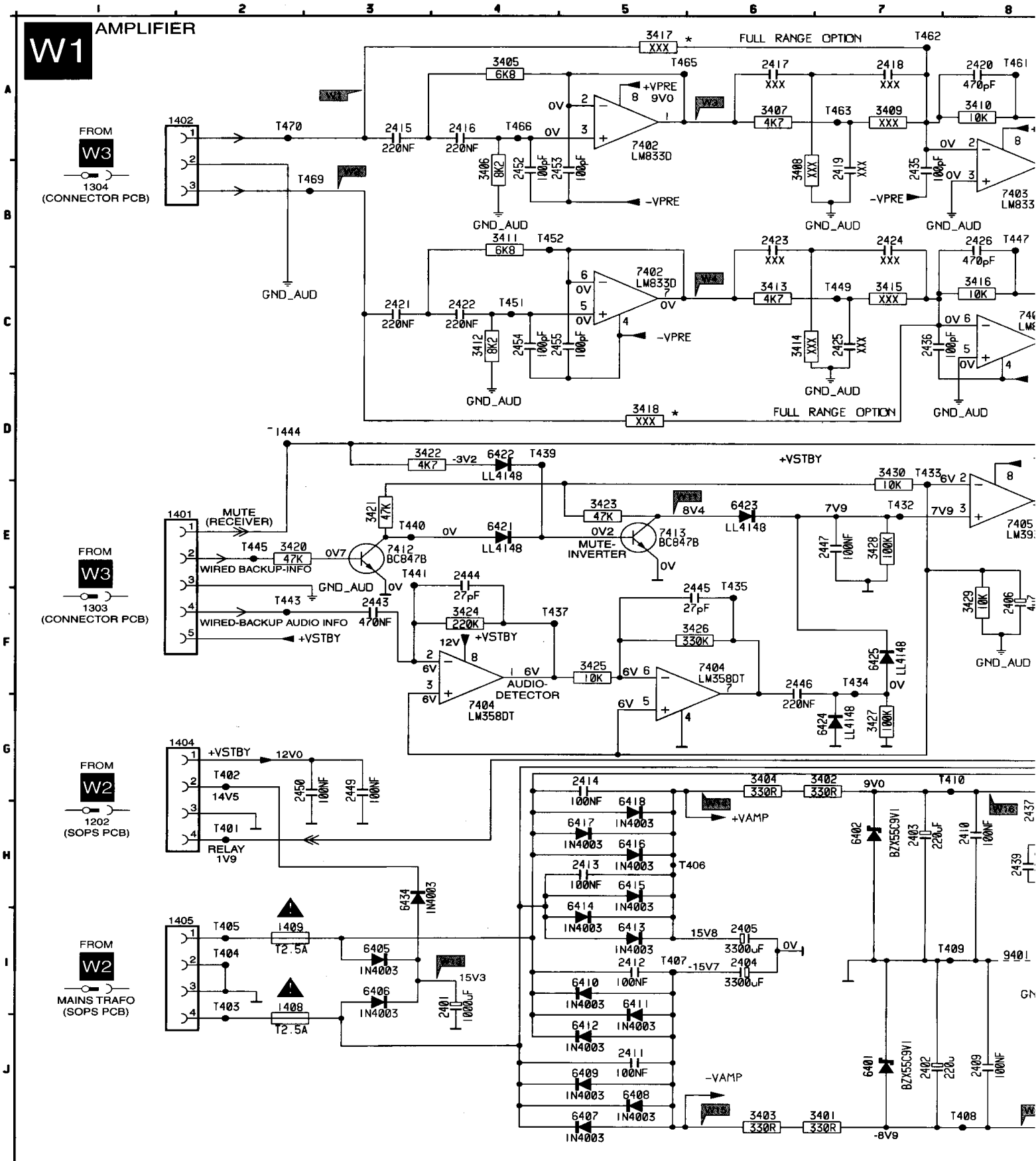


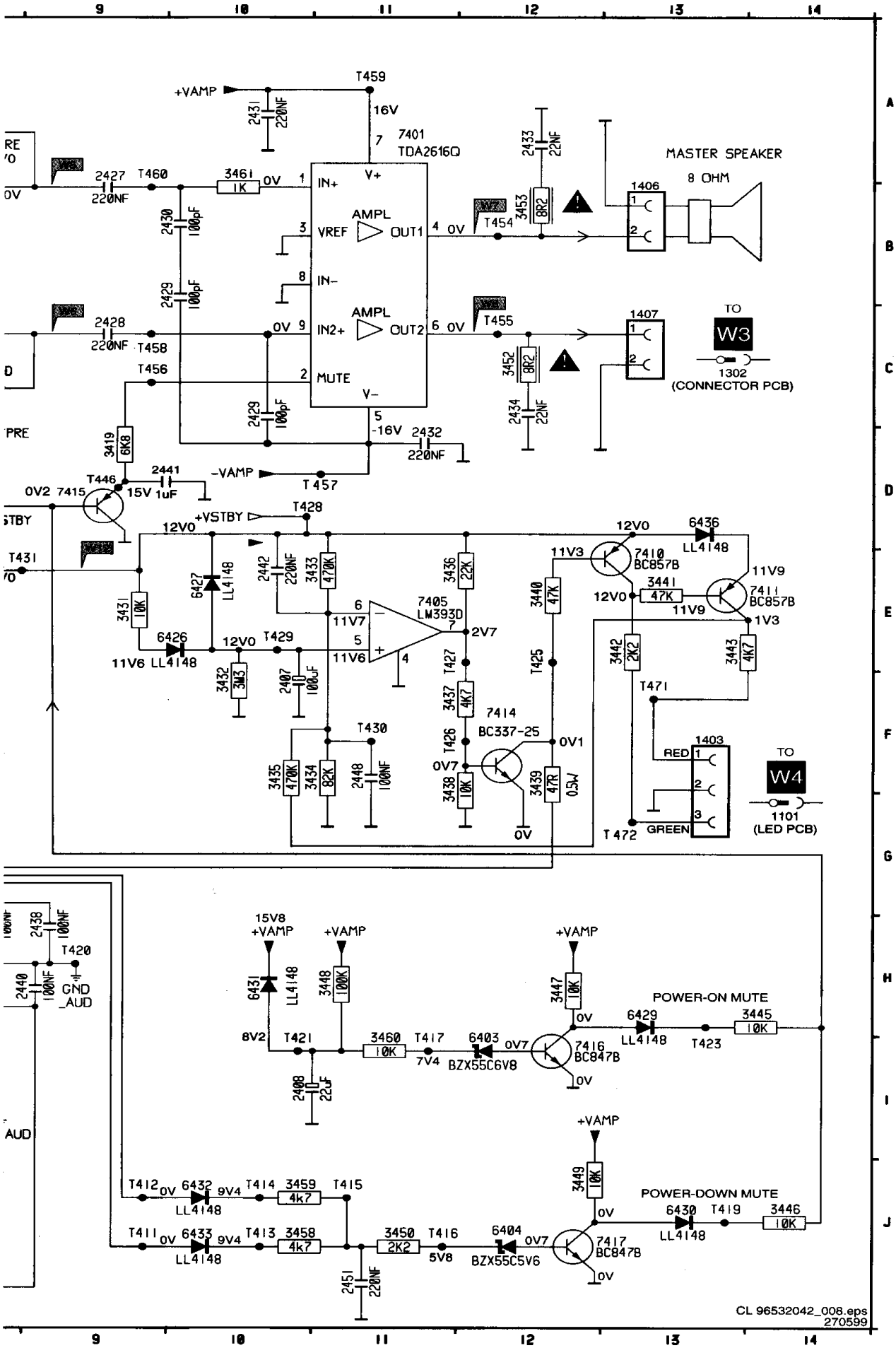


	864MHz 3104 217 06050	926MHz 3104 217 06060	433MHz 3104 217 06200
3724	100k	39k	39k
3763	----	10k	----
3796	560R	1k	5k6
5705	----	X	X
5708	X	----	----
3756	----	----	10k
3757	10k	10k	----
3762	10k	----	10k

1700 B1
1701 D7
1702-1 K20
1702-2 J20
1702-3 I20
1702-4 A15
1702-5 K20
1702-6 H20
1702-7 H20
1710 A2
2701 C10
2702 C10
2703 C9
2704 C10
2705 D8
2706 A5
2707 C11
2708 C12
2709 I2
2710 I2
2711 H2
2712 H3
2713 I3
2714 I4
2715 I4
2716 K5
2717 L4
2718 K3
2719 I15
2720 K15
2721 C17
2722 C18
2723 J1
2724 J20
2725 K20
2731 I7
2732 J9
2733 K9
2741 K7
2750 E3
2751 F7
2752 G7
2753 G7
2754 E3
2755 F7
2762 L16
2770 H13
2771 J10
2772 I11
2773 J11
2774 J11
2775 J9
2776 I10
2777 J10
2778 J12
2779 H13
2780 I11
2781 J14
2782 H16
2783 I17
2786 J12
2787 K14
2788 J16
2789 K17
2790 B18
2792 B15
2793 K15
2794 J15
3701 C4
3702 B10
3703 B2
3704 C4
3705 A6
3706 A6
3707 A6
3708 B6
3709 B5
3710 B6
3711 E11
3712 E10
3713 E11
3714 E9
3715 E9
3716 D12
3717 B9
3718 B9
3719 J1
3720 K2
3721 L3
3722 M4
3723 L4
3724 M4
3726 M4
3727 J5
3728 J5
3729 I3
3730 I2
3731 I3
3732 I8
3733 J8
3734 I8
3735 J8
3736 H3
3737 J6
3738 K6
3739 I19
3740 B16
3741 C16
3742 J8
3743 K8
3744 J8
3745 K8
3746 C17
3747 I18
3748 I15
3749 K15
3750 D3
3751 J18
3752 K18
3753 G7
3754 G7
3755 F7
3756 F3
3757 F4
3758 F2
3759 F2
3760 K18
3761 F10
3762 F3
3763 F2
3771 J10
3772 J11
3775 J9
3776 J10
3778 K14
3779 I14
3780 I14
3781 I15
3782 I16
3783 I17
3784 J19
3786 K14
3787 J15
3788 J16
3789 K17
3790 K19
3792 J17
3793 K17
3794 L4
3795 D6
3796 M20
4701 J19
4706 M20
5701 C12
5702 I7
5703 K7
5704 F4
5705 B2
5706 B5
5707 B10
5708 C2
6701 B8
6702 E2
6703 G7
6704 I18
6705 C18
7701 D10
7702 I1
7703 M3
7704 G6
7705 I8
7706 K8
7707 B6
7708 F5
7709 I12
7710-A I16
7710-B K16
7711 C18
7712 B17
7713 C16
7714 A18
7715 J19
7716 L19
7717 F9
7718 D7
7719 L18
7720 J18
F100 B2
F101 B5
F102 B11
F103 B9
F104 C8
F105 C9
F106 C3
F107 D9
F108 D3
F109 B18
F110 B17
F111 B15
F112 D4
F113 D4
F114 D10
F115 C18
F116 F6
F117 H19
F118 H20
F119 I16
F120 I9
F121 I20
F122 I9
F123 J6
F124 K6
F125 J20
F126 J16
F127 K20
F128 K20
F129 K4
F130 K4
F131 I3
F132 E6
F133 E6
F134 E6
F135 E6
F136 E6
F137 F6
F138 M19
F139 M20
F140 M20
F141 A2
F150 C16
F151 G8

Active surroundbox amplifier

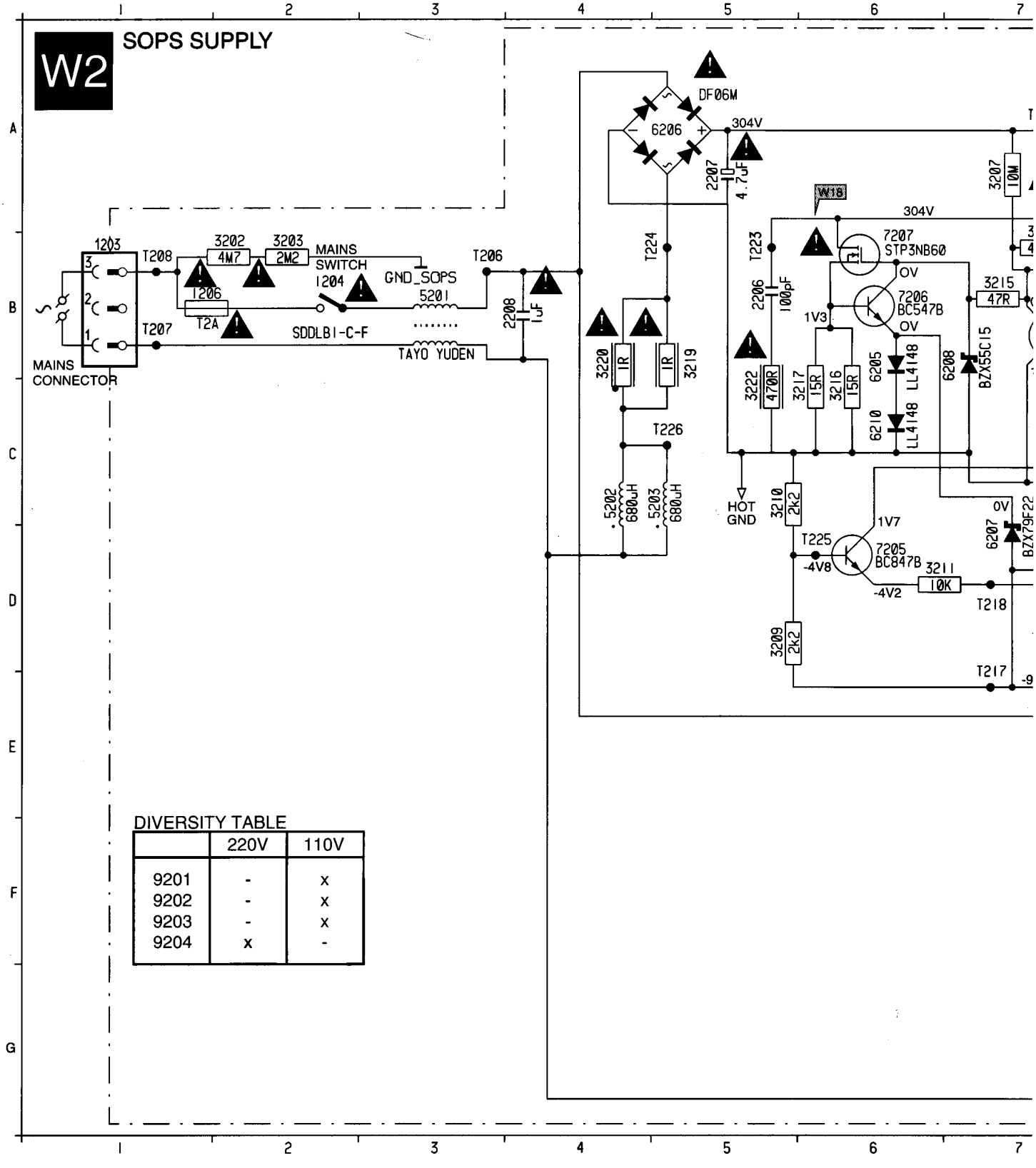




1401	E2	6410	I5
1402	A2	6411	I5
1403	F13	6412	I5
1404	G2	6413	I5
1405	I2	6414	J5
1406	B13	6415	H5
1407	C13	6416	H5
1408	J2	6417	H5
1409	I2	6418	H5
2401	I4	6421	E4
2402	J7	6422	D4
2403	H7	6423	E6
2404	I6	6424	G7
2405	I6	6425	F7
2406	F8	6426	E10
2407	F10	6427	E10
2408	I11	6429	H13
2409	J8	6430	J13
2410	H8	6431	H10
2411	J5	6432	J10
2412	I5	6433	J10
2413	H5	6434	H3
2414	G5	6436	D13
2415	A3	7401	A11
2416	A4	7402	A5
2417	A6	7403	C8
2418	A7	7404	F4
2419	B7	7405	E11
2420	A8	7410	E13
2421	C3	7411	E13
2422	C4	7412	E3
2423	B6	7413	E5
2424	B7	7414	F12
2425	C7	7415	D9
2426	B8	7416	I12
2427	B9	7417	J12
2428	C9	9401	I8
2429	C10	T401	H2
2430	B10	T402	G2
2431	A10	T403	J2
2432	D11	T404	I2
2433	A12	T405	I2
2434	C12	T406	H5
2435	B7	T407	I5
2436	C7	T408	J8
2437	H8	T409	I8
2438	H9	T410	G8
2439	H8	T411	J9
2440	H9	T412	J9
2441	D10	T413	J10
2442	E10	T414	J10
2443	F3	T415	J11
2444	E4	T416	J12
2445	F6	T417	I11
2446	F6	T419	J13
2447	E7	T420	H9
2448	F11	T421	I10
2449	G3	T423	H13
2450	G3	T425	E12
2451	J11	T426	F12
2452	B4	T427	E12
2453	B5	T428	D10
2454	C4	T429	E10
2455	C5	T430	F11
3401	J7	T431	E8
3402	G7	T432	E7
3403	G7	T433	D7
3404	G6	T434	F7
3405	A4	T435	F6
3406	B4	T437	F4
3407	A6	T439	D4
3408	B6	T440	E3
3409	A7	T441	E3
3410	A8	T443	F2
3411	B4	T444	D2
3412	C4	T445	E2
3413	C6	T446	D9
3414	C6	T447	B8
3415	C7	T449	C7
3416	C8	T451	C4
3417	A5	T452	B4
3418	D5	T454	B12
3420	E2	T455	C12
3421	E3	T456	C9
3422	D3	T457	D11
3423	E5	T458	C9
3424	F4	T459	A11
3425	F5	T460	B9
3426	F6	T461	A8
3427	G7	T462	A7
3428	E7	T463	A7
3429	F8	T465	A5
3430	D7	T466	A4
3431	E9	T469	B3
3432	F10	T470	A2
3433	E11	T471	F13
3434	F11	T472	G13
3435	F10		
3436	E12		
3437	F12		
3438	F12		
3439	F12		
3440	E12		
3441	E13		
3442	E13		
3443	E13		
3445	H14		
3446	J14		
3447	H12		
3448	H11		
3449	J12		
3450	J11		
3452	C12		
3453	B12		
3458	J11		
3459	J11		
3460	I11		
3461	B10		
6401	J7		
6402	H7		
6403	I12		
6404	J12		
6405	I3		
6406	I3		
6407	J5		
6408	J5		
6409	J5		

Active surroundbox supply

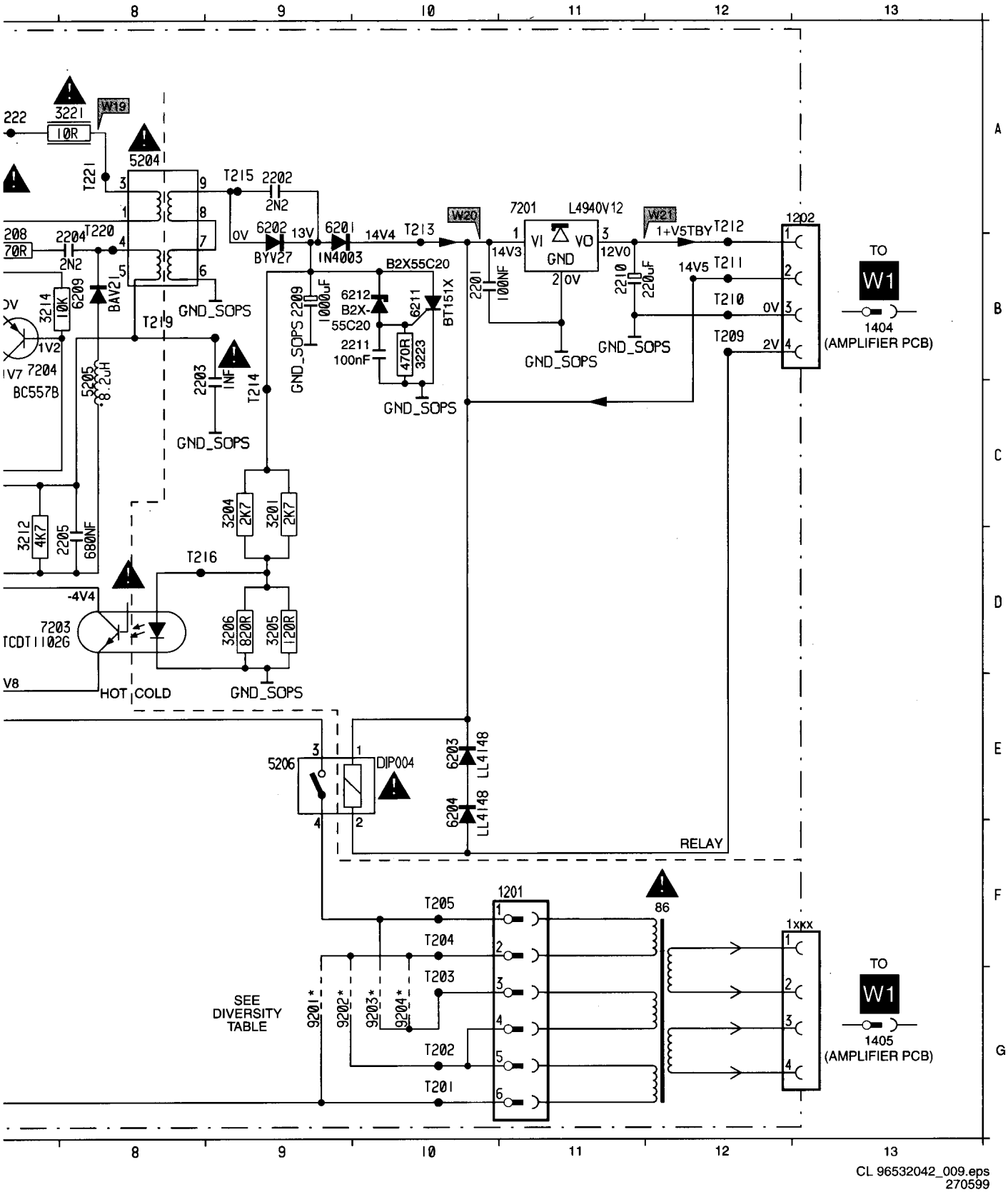
1201 F11	2201 B11	2207 A5	3202 B2	3208 B7	3215 B7	3222 C6	5204 A8	6204 E11	6210 C6	7205 D6
1202 B13	2202 A9	2208 B4	3203 B2	3209 D6	3216 C6	3223 B10	5205 B8	6205 B6	6211 B10	7206 B6
1203 A1	2203 B9	2209 B9	3204 C9	3210 C6	3217 C6	0086 F12	5206 E10	6206 A5	6212 B10	7207 B6
1204 B3	2204 B8	2210 B12	3205 D9	3211 D7	3219 B5	5201 B3	6201 A10	6207 D7	7201 A11	9201 G10
1206 B2	2205 D8	2211 C10	3206 D9	3212 D8	3220 B5	5202 C5	6202 A9	6208 B7	7203 D8	9202 G10
1209 B10	2206 B6	3201 C9	3207 A7	3214 B8	3221 A8	5203 C5	6203 E11	6209 B8	7204 B8	9203 G10



DIVERSITY TABLE

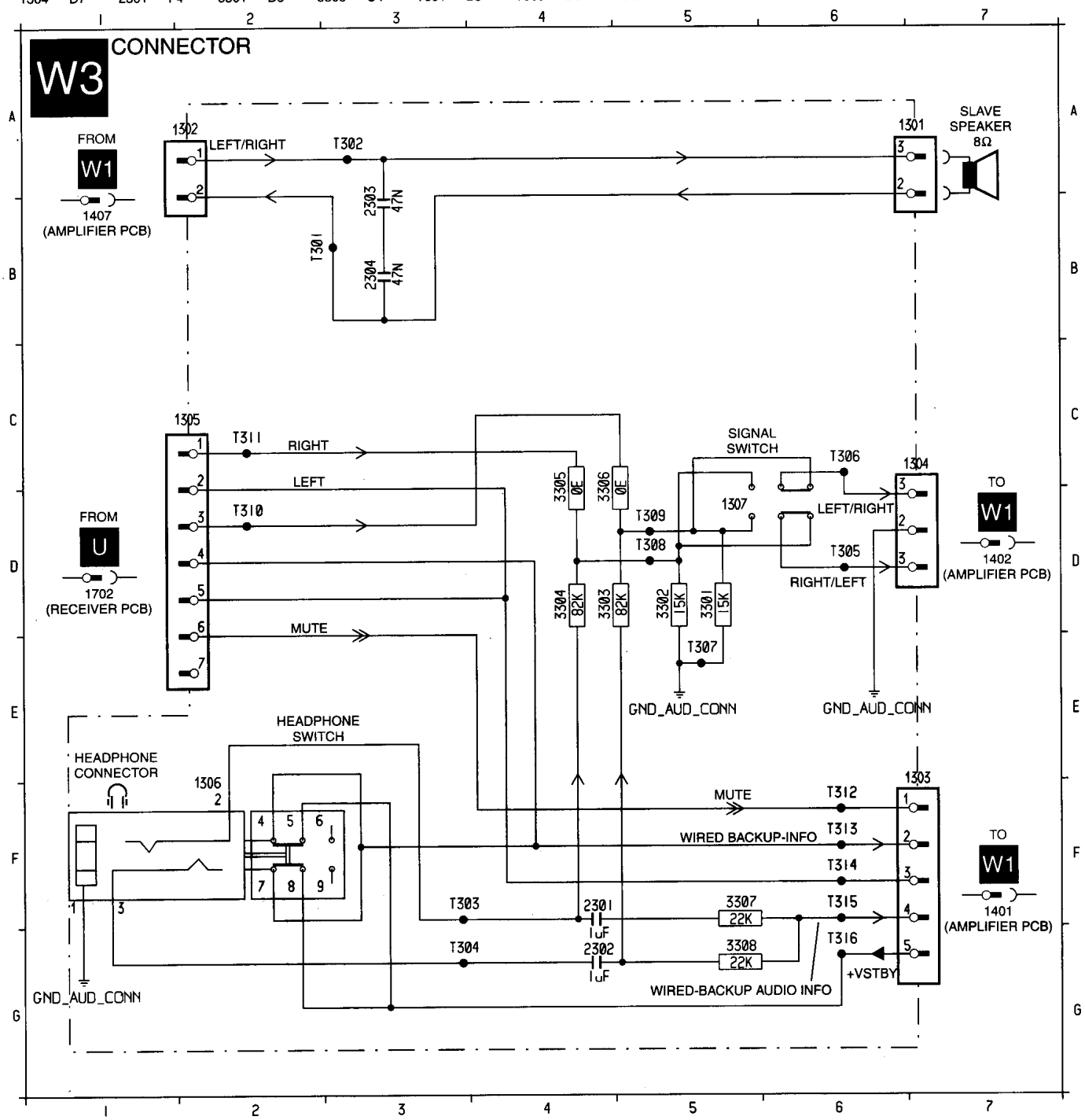
	220V	110V
9201	-	x
9202	-	x
9203	-	x
9204	x	-

9204 G10	T206 A4	T212 B12	T218 T218	T224 B5
T201 G10	T207 A1	T213 B10	T219 B8	T225 D6
T202 G10	T208 A1	T214 C9	T220 B8	T226 C5
T203 G10	T209 B12	T215 A9	T221 A8	
T204 F10	T210 B12	T216 D9	T222 A7	
T205 F10	T211 B12	T217 E7	T223 B6	



Active surroundbox connector

1301	A 7	1305	D2	2302	G4	3302	D5	3306	C5	T302	A3	T306	T310	D2	T314	F6
1302	A2	1306	F2	2303	B3	3303	D4	3307	F5	T303	F3	T307	T311	C2	T315	F6
1303	F7	1307	D5	2304	B3	3304	D4	3308	G5	T304	G3	T308	T312	F6	T316	G6
1304	D7	2301	F4	3301	D5	3305	C4	T301	B3	T305	D6	T309	T313	F6		



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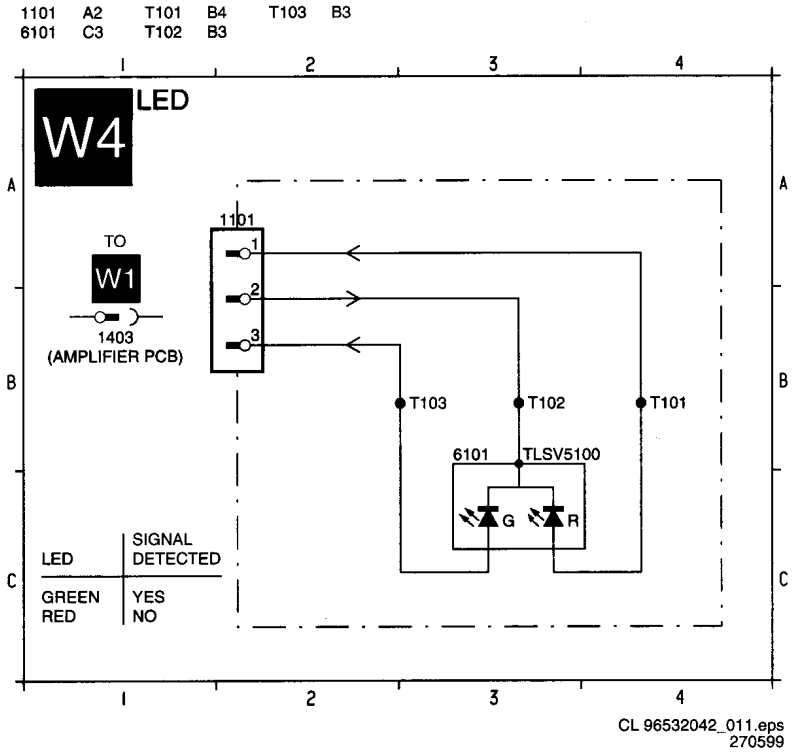
Active surroundbox led



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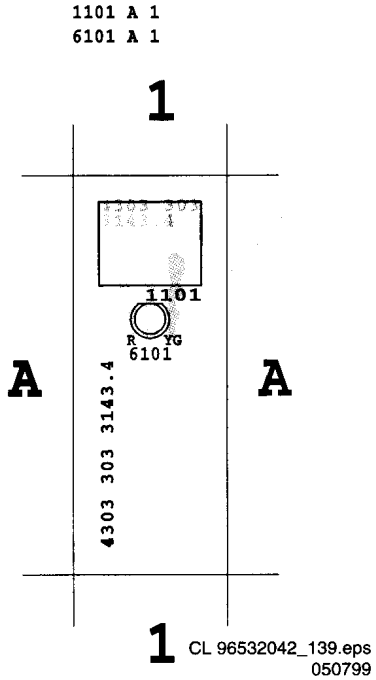
Led panel (W4 componentside)



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8. Electrical alignments

8.1 General alignment conditions

All electrical alignments should be made under the following conditions:

- Power supply voltage: 220-240V ± 10%; 50-60 Hz ± 5%.
- Warm-up time >10 minutes.
- Voltages and oscillograms are measured in relation to tuner earth (with exception to the voltages on the primary side of the power supply). Never use the cooling fins/plates as ground.
- Test probe: Ri > 10 MΩ, Ci < 20 pF.

8.2 Alignments on the Supply Panel (B)

8.2.1 +141V (Vbat) supply voltage

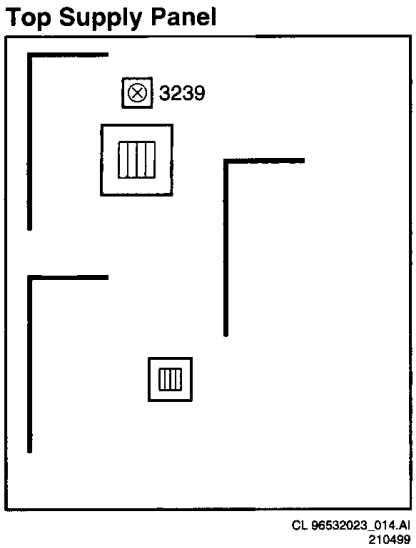

Figure 8-27

- Connect a voltmeter across C2223 (diagram B, +Vbat).
- Switch on the set.
- Using potentiometer R3239 (diagram B) adjust the Vbat supply voltage to +141V ± 0V5. (see Fig. 8-27

8.3 Alignments on the Large Signal Panel (A)

8.3.1 Focusing

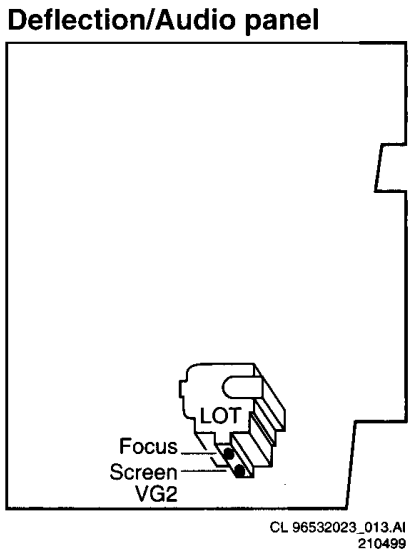

Figure 8-28

- Tune the set to a crosshatch test-pattern.
- Adjust the focus potentiometer (diagram A1, upper knob o the LOT, see Fig. 8.28) for an overall optimum focusing of the picture.

8.3.2 Vg2 adjustment

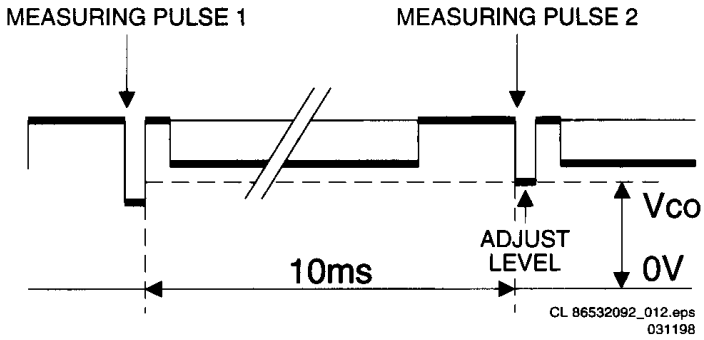

Figure 8-29

New method (with OSD-feedback):

- Put the set in the SAM mode (via the -button of the DST and entry-code 3 1 4 0), or via short circuiting the SAM pins 1 and 2 of connector 0356 on the SSP (diagram K7).
- Chose sub-menu 'General', and further menu-line 'Vg2 test pattern on/off'
- Activate the vg2 test pattern by toggling via right cursor-button to 'on'
- Place a mirror opposite of the TV-set, so that the OSD-feedback can be read
- First turn the Vg2-potmeter to the left. (osd-feedback is not readable now)
- If the vg2-potmeter is turned very slowly clockwise the next sequence of osd-messages will follow: out high--> in high -->in low --> out low. At the moment you see 'in low', the vg2-potmeter has been aligned correctly

Old method (with oscilloscope):

Elucidation: In the frame blanking period of the R, G and B signals applied to the CRT, alternately per frame two measuring pulses with different DC levels are inserted by the "HOP" video processor IC7300. During the first frame flyback a pulse is inserted used as reference for the Vg2 adjustment and in the next frame flyback a second pulse is inserted used as reference for the internal white "D" adjustment. For the Vg2 adjustment the pulse with the highest DC-level is used.

- Put the set in the SDM mode (via the -button on the DST, or via short circuiting the SDM pins 2 and 3 of connector 0356 on the SSP (diagram K7).
- Insert a black test-pattern signal (carrier 475.25 MHz) to the tuner input.
- Connect an oscilloscope (position 50V/Div DC and 2ms/Div) alternately to the CRT cathodes (red pin 8, green pin 6, blue pin 11) and measure for each cathode the DC level of the measuring pulse (see elucidation above and Fig. 8.29) and write down each value. Remark: Trigger the scope external via a CVBS signal (for instance via pin 19 of the scart1 connection).
- Adjust the Vg2 potentiometer (diagram A1, lower knob on the LOT) so that the measuring pulse with the highest noted level is on 156V level.

8.4 Alignments on the small signal panel (K)

8.4.1 40.4 MHz neighbour-channel sound trap

- Tune to a checker board test-pattern (system BG - and with a carrier frequency of 475.25 MHz).
- Connect an oscilloscope (trigger line frequent) to pin 19 (CVBS out) of the scart1 connection.
- Align the coil L5103 (diagram K1) completely downwards (see Fig. 8.30).
- Align the coil upwards till under- and overshoot arise at the black/white and white/black transitions in the video signal (Fig. 8.31).
- Align the coil downwards again till above mentioned under- and overshoot is just disappeared.

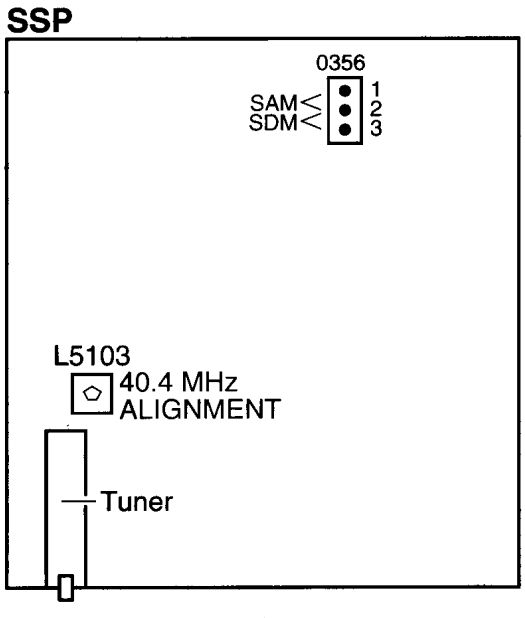

Figure 8-30

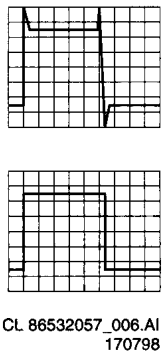

Figure 8-31

8.4.2 Alignments needing SAM-mode + measuring equipment

(These alignments could be of interest when ICs (7501, TDA9320AH), or the EAROM (7008, ST24E16) are exchanged on the SSP).

'IF AFC' (navigation to this menu item via Alignment --> General --> IF AFC)

Supply via a Service generator (e.g. PM5518) a TV-signal, with a signal-strength of at least 1 mV. Frequency 475.25 MHz. Use BG if possible, otherwise match the system of your generator with the received signal in the set.
In this procedure the Service-man is asked to go into Install menu and select 'Fine Tine'-menu-line. In this way the AFC of the set is disabled.
Procedure how to check correct alignment:

- If the IF-frequency-value in the 'Fine Tune'-line is between 475.18 MHz and 475.31 MHz, you do not need to re-align the AFC-value as mentioned above (SAM-menu).
- If this is NOT the case, decrease the 'Tuner IF'-value (in the SAM-menu) if the frequency on the 'Fine-tune'-line was lower than 475.18 MHz, or increase the 'Tuner IF'-value if the frequency on the 'Fine-tune'-line was higher than 475.31 MHz (initially first an 'Tuner IF'- alignment can be done, making the multi-burst signal flat).

Alignment procedure:

- During the 'IF AFC'-parameter adjustment one can see OSD feedback on the screen.
- The OSD feedback can give 4 kind of messages:

AFC-window	AFC-frequency versus reference
Out	High
In	High
In	Low
Out	Low

The first item (in or out) informs you whether you are in or out the AFC-window
The second item (high/low) informs you about whether the AFC-frequency is to high or to low

- First you must align the 'IF AFC'-parameter such that you come into the AFC-window (= 'in')
- Then you must look for the point where the 'IF AFC' parameter influences the high/low message. This level is the value you are looking for.

Service-tip: If you do not trust the accuracy of the frequency of your Service-generator, first 'measure' with 'Fine tune'-line (manual install-menu) of a good set your Service generator.

'Tuner AGC'
Supply a TV-signal, with a frequency of 475.25 MHz and a signal-strength of about 2 mV.
Measure the DC-voltage on pin 1 of the Tuner (position 1102). With the 'Tuner AGC'-alignment in the SAM-menu, this voltage can be aligned. Alignment is correct when DC-voltage is just below 3.8 V

8.4.3 Alignments and settings in the Service Alignment Menu

General
Entering the SAM can be done in 2 ways:
- Briefly shorting the service pins 'SERVICE ALIGNMENT MODE' on the front side of the SSP (pins 1 and 2 of connector 0356)

or:
- Pressing the key on the Dealer Service Tool (DST) (RC7150), followed by keying in the password "3140" and then pressing the key.

The Service Alignment Mode menu will now appear on the screen. The following information is now displayed:
1. The software date ('Date') and version ('ID.') of the RO (Example: MG31E11.0_xxxxx).
   (This software-code stands for MG3.1 (chassis), E for Europe, 1-language, 1.0 software version, xxxxx latest 5 digits of 12nc code software.)
2. The accumulated total of operation hours ('Operation Hours').
3. ('Errors') followed by maximal 10 errors. The most recent error is displayed at the upper left. For explanation errors see chapter 5 (table 5.1).
4. ('Defect. Module'). Here the module that generates the error is displayed. (If there are multiple errors in the buffer that have not all been generated by a single module, there is probably another defect. The message 'Unknown' will then be displayed here).
5. ('Reset Error Buffer'). The error buffer can be reset by pressing the key.
6. ('Functional Test'). All devices are tested via the key. Eventual errors are displayed in the error buffer. The error buffer is not erased, the contents return when the Functional Test is terminated.
7. ('Alignments'). This enables the Alignments sub-menu to be called up.

The following alignments can be selected:
'General':
- 'Drive'
- 'Luminance Delays'
- 'EHT Compensation'
- 'Soft Clipper'
- 'Luma Gain'
- 'IF AFC'
- 'Tuner AGC'
- 'Blending Intensity'
- 'Peak White Limiter'
- 'Vg2 Test pattern'
- 'VDS/PIP alignments'(optional)

'Normal Geometry':
- General geometry alignments.

'Super wide geometry': (only valid for widescreen sets)
- Geometry alignments for the 'Super Wide' position in 16:9 sets (only valid for wide screen sets; alignments can be performed, however, it is better to set values as mentioned below).

'Options':
- Setting the initialisation codes in the set via text.

'Option numbers':
- All options together, expressed in two long numbers. The original factory setting for these numbers can be found on the picture tube sticker on the inside of the set.

'Store':
- Store all alignments.

The alignments are explained now in the sequence of the sub-menu:

General alignments in Service Alignment Menu:
- Once all alignments/settings have been completed than 'Store' must be selected to record all the values in the permanent memory of the set.
- If the option codes have been changed and stored, the set has to be switched on and off using the mains switch to activate the new settings (when switching on and off via Standby, the option code settings are NOT read by the microprocessor).
- If an empty EAROM (permanent memory) is detected, all settings are set to pre-programmed default (standard) values.
- A built-in test pattern can be called up in various sub-menus. The test pattern generator can be switched on using the item 'Test pattern on/off'. The test pattern only appears AFTER the specific alignment has been selected. The test patterns are generated by the Teletext-IC.

'Drive'
Method 1:
If you want to align tint-settings with a colour-analyser, the Test pattern must be switched on. You get a white block in middle of the image now.
Before doing the tint-settings the 'Cathode'-parameter must be aligned. This is dependent of the picture tube size.

Lightoutput cd/m2	
4:3	16:9
25" : 500	24" : 550
28" : 350	28" : 450
29" : 400	32" : 400

Tint-settings:
Set the red, green and blue parameters for the three tint-settings 'Normal',. 'Warm' and 'Cool'. The next values must be aligned:

	Cool	Normal	Warm
X	280	289	303
Y	287	299	314
Temp	10200	8700	7200

Method 2:
Without having a colour-analyser one can set some parameters. This is the next best solution. The setting-parameters are average values coming from productio (statistics).
Before doing the tint-settings the 'Cathode'-parameter must be setted. For all picture tubes the following vallue must be entered: 5
The 'Tint' setting must be on 'normal'.
Tint-settings:
Set the white levels for the three tint-settings 'Normal', 'Warm' and 'Cool'. The next values must be entered:
Remark:
In case the HOP N2 IC is used in stead of the HOP N1 IC, automatically, two additional Menu lines are displayed, namely:
- 'Red BL offset'
- 'Green BL offset'

Herewith the black levels can be aligned very precise.

	Cool	Normal	Warm
R	22	25	29
G	20	20	20
B	17	14	7

'Luminance delays'
With the 'Luminance delays' alignment the luminance information is placed on the chrominance information (brightness is pushed onto the colour). Use a colour bar/grey scale pattern as test signal.
- Lum. Delay Pal: Apply a PAL colour bar/grey scale pattern as a test signal. Adjust 'Lum. Delay PAL' until the transients of the colour part and black and white part of the test pattern are at the same position.
- Lum. Delay Secam: Apply a SECAM colour bar/grey scale pattern as a test signal. Adjust 'Lum. Delay PAL' until the transients of the colour part and black and white part of the test pattern are at the same position.
- Lum. Delay Bypass: Apply a NTSC colour bar/grey scale pattern as a test signal. Adjust 'Lum. Delay Bypass' until the transients of the colour part and black and white part of the test pattern are at the same position.

'EHT compensation'
Fixed value: 0

'Soft clipper"
Fixed setting: 'Pwl+0%'

'Luma gain'
Fixed value: 1

'Tuner IF'
See chapter 8.4.2.

'Tuner AGC'
See chapter 8.4.2. The SAM-mode is needed to make alignment, a test generator to make signal, a DC-Voltmeter to measure at pin 1 of the Tuner.

'Blending Intensity'
(This alignment could be used when micro controller or HOP-IC has been replaced).
It aligns the level of transparency of the menu-picture blended into the main-picture.
- Position the brightness-, contrast- and colour-setting in the middle-position. (picture-menu).
- Apply a signal with a 100 % white video-pattern
- Connect an oscilloscope to pin 3 of connector 0340 of the CRT panel and measure the Red output level
- Align 'blending intensity'-parameter such that the blended signal is 65 % of the black-white amplitude. Practically this will be about 1.3 V (blended signal) versus 2 V(full white signal).
- The parameter can be adjusted in between 0 and 31.

'Peak White Limiter'
Dependent of the picture-tube size (25", 29", and 24", 28", 32" wide screen tubes) the next value of the table must be entered:

24"	11
25"	11
28"	11
29"	11
32"	11

'Vg2 Test pattern'
Here the Vg2 Test pattern can be switched on.
We get feedback on the screen now, how to align correctly the vg2-potmeter of the LOT. This alignment is explained in chapter 8.3.2.

'VDS/PIP Alignments' (optional)
With the 'VDS/PIP' alignments the following settings are setted and stored in the local memory IC7991.
- 'Tuner IF': This method is exactly the same as the 'Tuner IF'-alignment that already has been explained for the SSP-Tuner.
- 'Tuner AGC': This alignment that needs test-equipment is described in chapter "Alignments on Full Dual Screen module (M), needing SAM-mode + measuring equipment"

Geometry alignments 'Normal Geometry' in the Service Alignment Menu
Warning:
At this moment the INTERNAL test pattern of the set will lead to a mis-aligned geometry of the picture. Please do not use internal test pattern. When using a service generator with a geometry-pattern (e.g. a crosshatch-pattern), the set can be aligned without problems.
Before doing this alignment, check whether the image is not slightly rotated. (Install-menu-->Setup-menu-->'Picture Tilt'-menuline)

Vertical amplitude and centring
Select 'Test Pattern On' and set the begin conditions for 4: sets (25", 28" and 29"):
- Vertical S-correction value on 13 for 29" set, and on 19 for the 25" and 28" sets.

The boundary-stripes of the test pattern should be positioned on the edge of the picture tube.
Set the begin conditions for 16:9 sets (24", 28", 32"):
- Vertical S-correction value on 7 for 24", on 8 for the 28" an on 7 for the 32" set.

The boundary-stripes of the test pattern should be positioned on the edge of the picture tube.
1. Align 'V slope' (when aligning the below half of the picture is blanked). The middle line of the test pattern must be matched with the edge of this blanking/picture transient in the middle of the picture. Pushing button again, gives you previous menu again. (This alignment is meant to align the zero-crossing of the frame-deflection to the mechanical middle of the picture tube.)
2. Align the vertical amplitude using 'V amplitude' so that the test pattern is fully visible.
3. Align the vertical centring using 'V shift' so that the test pattern is located vertically in the middle.
4. If necessary repeat the alignment of 'V amplitude', in order to get 'V shift' OK.

Vertical S correction
Select 'Test pattern on'.
Align the vertical S correction using 'V S-correction' so that the vertical amplitude at the top of the picture is equal to the amplitude in the middle of the picture.

Horizontal centring and amplitude
Select 'Test pattern on'.
1. Using 'H amplitude' align the horizontal amplitude so that the entire test pattern is visible.
2. Use an external test signal, with a centre-reference from a service-generator. Use 'H shift' to align the picture horizontally in the middle.
3. Repeat the 'H amplitude' alignment if necessary.

East/west alignment
Select 'Test pattern on'.

1. Use 'East/West Parabola' to align the vertical lines until straight.
2. Use 'East/West Corner' to align the vertical lines in the corners until straight.
3. Use 'East/West Trapezium' to align for a rectangular.
4. Use 'Horizontal Parallelogram' to align for straight vertical lines if necessary.
5. If necessary select 'East/West Corner' and align as required.
6. Repeat steps 1 to 4 if necessary.

Note:
The menu-line "East/West Corner" is used in sets with HOP N1 IC.
In case the HOP N2 IC is applicated, this line is replaced by the following menu-lines:
- 'Upper East/West Corner' (align)
- 'Lower East/West Corner' (align)
- 'Horizontal Bow' (neutral value 31, with this alignment the E/W parabol can be corrected such that it becomes symmetrical.)

Geometry alignments 'Super wide geometry' in the Service Alignment Menu
Only applicable to 16:9 sets.
- Vertical Shift: enter value here of normal geometry
- Vertical Amplitude: adjust image such that outer vertical ref-lines are just visible
- Vertical S correction: enter value here of normal geometry.
- Horizontal amplitude: enter value here or normal geometry subtracted by 4.
- East/west parabola: enter value here or normal geometry.

8.4.4 Option menu

Introduction:
The microprocessor communicates with a large number of I2C-ICs in the set. To ensure good communication and make digital diagnosis possible, the microprocessor has to know which ICs have to be addressed. The presence of specific ICs or functions is made known by means of the option codes.
All options codes can be manipulated using both the optio numbers and/or the Option menu.
All hardware related options are incorporated under the heading 'Options' of the 'Alignments' sub-menu of the 'Service Alignment Mode'. All software related options that are incorporated under the heading 'Dealer Options' of the 'Service Alignment Mode", can also be reached directly via the 'button of the DST.

Options in the Service Alignment Mode

Menu-item	Subjects	Options	Physically in the set
Dual screen/PIP	Aux type	None	
		Video Dual Screen	
		PIP	
	Text dual screen	Yes	Text dual screen present (only valid for 16:9 sets
		No	Text dual screen not present
	Aux. Headph. Sound (optional)	Yes	
		No	
Teletext/EPG	TXT	Yes	Teletext present
		No	Teletext not present
	NextView present	Yes	NextView set
		No	NextView not set
	NextView type	Flashram	IC7013 present on SSP (diagram K7)
		No Flashram	IC 7013 not present on SSP (diagram K7)
Communication	Easylink Plus	Yes	Easylink Plus set
		No	Easylink Plus not set
Picture tube	CRT Type	4:3	4:3 picture tube
		16:9	16:9 picture tube
	Picture Rotation(only for 16:9	Yes	Frame rotation circuitry present on LSP (IC7440 diagram A3
		No	Frame rotation circuitry not present (IC7440 diagram A3
	Dynamic Focus	Yes	Dynamic focus picture tube present
		No	Dynamic focus picture tube not present
Video Repro	Feature box type	Eco	IC7606 present on SSP (diagram K5)
		Prozonic	IC7606 and IC7607 present on SSP (diagram K5)
		Falconi	
	Field memories (only with falconic)	2	
		3	
	Lightsensor	Yes	
		No	

	PALplus	Yes	
		No	
	Combfilte	Yes	IC7560 present on SSP (diagram K1)
		No	IC7560 not present on SSP (diagram K1)
	Picture improvement	Yes	
		No	
	Picnic AGC	Yes	In normal operation: Yes
		No	During 'Drive' alignments: No
	Signalling bits	Yes	
		No	
Source Selection	External 3	Yes	3rd EURO connector present
		No	No 3rd EURO connector present
	External 4	Yes	4th EURO connector present
		No	No 4th EURO connector present
Audio Repro	Dolby	None	
		Pro Logi	
		Digital	MCS-module present
	Rear speakers	Corded	
		Virtual	
		Cordless	Active surroundbox present
	Acoustic system	FL7	Applicable for sets with subwoofer
		FL8	Applicable for sets without subwoofer
		FL9	Monitor look
Miscellaneous	Heatsink Present	Yes	Heatsinks present on CRT/Scavem panel (diagram F)
		No	Heatsinks not present on CRT/Scavem panel (diagram F)

Dealer Options in the Main-menu of Service Alignment Mode

Menu name	Subjects	Options	Physically in set
Picture options	CTI	Yes	CTI enabled
		No	CTI disable
Personal	Blue Mute	Yes	Blue mute active in case no picture detected
		No	Noise in case of no picture detected
	Virgin Mode	Yes	TV starts up once with language selection menu after mains switch on for the first time (virgin mode)
		No	TV does not starts up once with language selection menu after mains switch on for the first time (virgin mode)
	Auto store mode	None	Autostore mode disabled (not in installation menu)
		PDC-VPS	Autostore mode via ATS (PDC/VPS) enabled
		TXT page	Autostore mode via ACI enabled
		PDC-VPS-TXT	Autostore mode via ACI or ATS enabled
	Demo Mode Enable	Yes	Demo mode enable
		No	Demo mode disable
	Auto TV	Yes	Auto TV mode enabled
		No	Auto TV mode disabled
Teletext	TXT Preference	TOP	Preference to TOP teletext
		FLOF	Preference to FLOF teletext
	East/West TXT	West	TXT characters for non -/58 sets
		East	TXT characters for -/58 sets

- After the option(s) have been changed, they must be stored via the STORE command.
- The new option is only active after the TV is switched off and then back on again using the mains switch (the EAROM is then read out again).

8.4.5 'Option number'

In case the EAROM has to be replaced, all the options will also require resetting. To be certain that the factory settings are reproduced exactly, both option numbers have to be set. These numbers can be found on a sticker on the picture tube.
Example: Option number 28PW9615/12 is:
05099 12568 04931 00016
12343 00001 00000 00000

8.5 Alignments on Full Dual Screen module (M), needing SAM-mode + measuring equipment

(These alignments could be of interest when ICs (7501, TDA9320H), or the EAROM (7991, M24C04) are exchanged on the FDS-module, or if the Tuner UV1316 has been exchanged

8.5.1 40.4 MHz neighbour-channel sound trap

- Tune the FDS-module to a checker board test-pattern (system BG - and with a carrier frequency of 475.25 MHz). See to it that the main-program of the set is tuned to another channel.
- Connect an oscilloscope (trigger line frequent) to pin 19 (CVBS out) of the scart2 connection. This output is WYSIWYR (what you see is what you record)
- Align the coil L5103 (diagram M1) completely downwards.
- Align the coil upwards till under- and overshoot arise at the black/white and white/black transitions in the video signal (Fig. 8.32).
- Align the coil downwards again till above mentioned under- and overshoot is just disappeared.

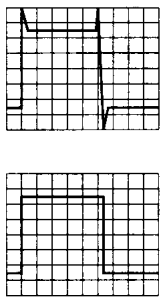

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Figure 8-32

8.5.2 'IF AFC'

See chapter 8.4.2 (IF AFC alignment on the SSP).

8.5.3 'Tuner AGC'

Supply a TV-signal, with a frequency of 475.25 MHz and a signal-strength of about 2 mV.
Measure the DC-voltage on pin 1 of the Tuner UV1316 (position 1102). This pin 1 (test point M1) can be accessed easy, by measuring at the component-side of the module on smd-elco 2116 just underneath the Tuner.
With the 'Tuner AGC' alignment in the SAM-menu (Alignments --> General -->VDS/PIP --> Tuner AGC), this voltage can be aligned. The alignment is correct when the DC-voltage is just below 3.8 V

8.6 Alignments on the Surround Transmitter module (R)

This alignment can only be performed when having mentioned (in alignment instructions) equipment.
Limited repair can be exercised if defective circuit is in the area that no alignment is needed.
If defective part is in circuitry where alignments are necessary two things can be done:
- swap panel by a new one
- if alignment equipment is available module can be aligned according described alignment-instructions:

8.6.1 Frequency Deviation level of Transmitter

- Insert on test points R1 (= F103) and R2 (=F106) a sine wave signal of 400 Hz with a amplitude of 3 Vrms.
- Align potmeter 3157 such, that frequncy-deviation is 75 kHz (+/- 5 kHz). This corresponds with a amplitude of 80 mV(rms) on testpoint R11 (F 112); 230 mVpp.

8.7 Alignments on the Surround Receiver module (U)

(Receiver pcb)
Component-side

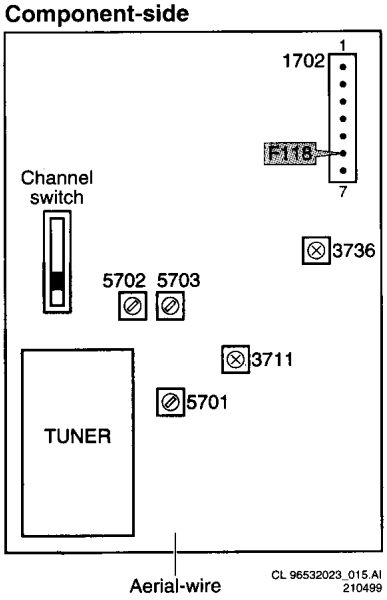

Figure 8-33

This alignment can only be performed when having mentioned (in alignment instructions) equipment.
Limited repair can be exercised if defective circuit is in the area that no alignment is needed.
If defective part is in circuitry where alignments are necessary two things can be done:
- swap panel by a new one
- (see Fig. 8.33). if alignment equipment is available module can be aligned according described alignment-instructions:

(note: the alignment-components are covered by glue, so this must be cleaned first).

8.7.1 Alignment of FM-detection coil

- Use a RF-generator as source. (1 mV, modulation 75 kHz)
- Dependent of receiver-version place receiver on channel 4 (433.9375, 926.250 or 864.00 MHz)
- Align coil 5701 such, that at test point U6 (= F114) a maximal audio frequency is detected.
- Now swap the generator from frequency - 150 kHz to frequency + 150 kHz, with same amplitude and modulation, and align 5107 such, that stop-pulse that can be measured at F104 (cathode of 6701) is symmetrical around 10.7 MHz. (low value is < 0.3V, high value is > 3.5 V)

8.7.2 Alignment of Tuned/Mute level

- Use a RF-generator as source. (3 to 7V, modulation 75 kHz)
- Dependent of receiver-version place receiver on channel 4 (433.9375, 926.250 or 864.00 MHz)
- Align potmeter 3711 such, that at pin 6 of connector 1702 (=F118) mute-level is down at 3 V and high at 7 V.

8.7.3 Alignment of VCO-demodulator

- Use a RF-generator as source. (1 mV, unmodulated)
- Dependent of receiver-version place receiver on channel 4 (433.9375, 926.250 or 864.00 MHz)
- Align potmeter 3736 such, that at test point F131 (pin 11 of TDA1578A), you measure 100 kHz (+/- 300 Hz).

9. Circuit descriptions and list of abbreviations

9.1 Circuit descriptions

For the circuit description see the provisional Training Manual MG3.1E (3122 785 10007)

9.2 List of abbreviations

16:9-ARFRONT	16:9 aspect ratio input from side I/O
50Hz/60Hz	50Hz/60Hz mains frequency
6-CHANNEL DAC	6- Channel DAC
AFC	Automatic Frequency Control
AGC	Automatic Gain Control
AM-FM	Amplitude Modulation/Frequency Modulation
AM-SOUND	Amplitude modulated sound signal
AUDIO_C	Audio Centre
AUDIO_L	Audio Left
AUDIO_R	Audio Right
AUDIO_SL	Audio surround Left
AUDIO_SW	Audio Subwoofe
AUDIO-L-PROC	Audio left processed
AUDIO-R-PROC	Audio right processe
AUDIO-SR	Audio surround right
AUX-SUPPLY	Auxiliary supply
BC-PROT	Beam current protection
BG	System B and G
BLC-INFO	Black current information
B-SC1-IN	Blue scart1 in
B-SC2-IN	Blue scart2 in
B-TXT	Blue teletext
B-vc	Blue from video-controller
C	Center
C/16/9	Chrominance input
C-7-OUT	Chrominance on pin 7 scart (variant)
CENTER	Center speake
C-FRONT	Chrominance front input
CL_DS_L	Constant Level Dual Screen Left
CL_DS_R	Constant Level Dual Screen Right
CL_L	Constant Level Left
CL_L_OUT	Constant Level Left out
CL_R	Constant Level Right
CL-R-OUT	Constant Level Right out
CODEC	Coding/Decoding
COMP	Compander ON/OFF
Compair	Computer aided repair
CORDL_L	Cordless Left
CORDL_R	cordless Right
CORE TOP LEVEL	Core Top Level
CRT	Cathode ray tube
CSM	Customer Service Mode
C-UI	Chrominance UI
CVBS	Composite Video Blanking Signal
CVBS_Y-UI	CVBS Y UI
CVBS-PIP-DS	CVBS Picture In Picture dual Scree
CVBS-SC1-IN	CVBS scart1 in
CVBS-SC2 OUT	CVBS scart2 out
CVBS-SC2-IN	CVBS scart2 in
CVBS-SC3-IN	CVBS scart3 in
CVBS-SC4-IN	CVBS Scart4 IN
CVBS-TER	CVBS terrestrial
CVBS-TXT-DS-OUT	CBVBS teletext Dual Screen out
CVBS-TXT-OUT	CVBS teletext out
CVBS-Y-FRONT	CVBS luminance front input
DAC-HOP	Digital analogue converter HOP IC
DC_PROT/ AUDIO_SR	DC protection (for supply)
DC-filament	Filament supply voltage
DC-PROT	DC protection
DETECT	Detect signal side I/O input
DFU	Directions For Use
DIG_IN1	Digital In 1
DIG_IN2	Digital In 2
DIGITAL I/O	Digital in/out
DIG-OUT	Digital out
DNR	Dynamic Noise Reduction
DS-AUDIO-L	Dual Sound Audio Left
DS-AUDIO-R	Dual Sound Audio Right
DSP	Digital Signal Processing
DST	Dealer Service Tool
DUET	DUET-IC
DVD	Digital Versatile Disc
DYN-FASE-COR	Dynamic phase correction
EHT-INFO	Extra high tension information
EPG	Electronic Programme Guide (= NexTView)
EW-DRIVE	East-west drive signal
FALCONIC	Field and line rate convertor IC
FBCSO	Fixed beam current switch off
FBL-DS-OUT	Fast Blanking Dual Screen out
FBL-FDS	Fast Blanking Full Dual Screen
FBL-PIP	Fast Blanking PIP
FBL-SC1-IN	Fast blanking signal for scart1 in
FBL-SC2-IN	Fast blanking signal for scart2 in
FBL-TXT	Fast Blanking Teletext
FDSL-OUT	Full Dual Screen - Left out
FDSR-OUT	Full Dual Screen - Right out
FEAT-U	U from Feature Box
FEAT-V	V from Feature Box
FEAT-Y	Y from Feature Box
FILAMENT	Filament of CRT
FILAMENT-PROT	Filament protection
FLASH	Flash memory
FM SOUND	Frequency Modulation Sound
FRAME ROTATION	Frame rotation
FRAME-ROT +	Frame rotation +
FRONT-C	Front input chrominance (SVHS)
FRONT-DETECT	Front input detection
FRONT-Y_CVBS	Front input luminance or CVBS (SVHS)
GHOST-IN	Signal Ghost cancellation in
G-SC1-	Green scart1 in
G-SC2-	Green scart2 in
G-TXT	Green teletext
G-vc	Green from video-controller
HA	Horizontal Acquisition
HA1	Horizontal Sync (diversity)
HA-D	Horizontal Sync from HIP-IC to FDS
HD	Horizontal drive coming from PICNIC
Hdefl-1in	Horizontal deflection signal needed for DC-shift circuitry
Hdefl-lin	Horizontal deflection linearity
HEATER	Heater (Filament)
HFB	Horizontal flyba
HFB+13V	Non rectified output 13V-winding LOT
HFB-D	Horizontal Fly Back to FDS
HIP	High-end Input Processor
HOP	High-end Output Processor
HOSD PIP	Horizontal OSD PIP
HP	Headphone
HS-D	Main, Horizontal sync input POPOV IC
I2C	Inter-integrated Circuit Bus
I2S-CL	I2S bus clock
I2S-DSP-IN	I2S digital signal processor in
I2S-DSP-OUT	I2S digital signal processor out
I2S-DSP-OUT1	Serial-DSP-bus-out1
I2S-WS	I2S bus word stroke

IN-C_IN-R-SC2	Either Chrominance-in scart2 or Red-in scart pin 15
IN-FRONT-SNDL	Sound left front in
IN-FRONT-SNDR	Sound right front in
IN-SC1	In scart1 blue
IN-SC1-G	In scart1 green
IN-SC1-R	In scart1 red
IN-SC1-SNDL	In scart1 sound left
IN-SC1-SNDR	In scart1 sound right
IN-SC2	In scart2 blue
IN-SC2-CVBS_Y	In scart2 CVBS or luminance (SVHS
IN-SC2-FBL	In scart2 fast blanking
IN-SC2-G	In scart2 green
IN-UI-B	B input from UI
IN-UI-FBL	Fast Blanking input from UI
IN-UI-G	G input from UI
IN-UI-R	R input from UI
IO-BUS	In/Out - Bus
IO-BUS	In/out bus
IR-LED	Drive signal for the service Infra red LED
KEYBOARD	Top controls
L	Left Audio
LDP	Line deflection protectio
LED	Light Emitting Diode
LEFT	Left
LEFT_DOWNMIX	LEFT Downmix
LEFT_IN	Left In
LEFT_OUT	Left out
LF	Left output
LIGHT SENSOR	Light sensor
LINE-DRIVE	Line drive signal
LMN	System L,M,N
LNA	Low noise adapter
LS CORRECTION	Picture with corrections
LSP	Large signal panel
LV-	Frame coil sink signal to the N/S correction circuitry
LV+	Frame coil drive signal from the frame output stag
MCADEC_RESET	Reset signal (Master reset
MCS-MPEG	Multi channel sound - MPEG
MSP-CLOCK	Clock signal multi-standard sound processor
MUP	Micro-Computer
MUTE	Mute-Line
N52502	CAD-naming referring to other sub-schedule
NC	Not Connected
NVM	Non Volatile Memory
O/C	Open Circuit
ON/OFF LED	On/off control signal for the LED
OSD	On Screen Display
OTC	OSD, Teletext Controlle
OUT-1	Y-output POPOV IC
OUT-2	V-output POPOV IC
OUT-3	U-output POPOV IC
OVERRULE-TXT	Overrule Teletext
P2-5	9for MG3.1E, status 4 (scart 4)
P2-6	(for MG3.1E, status 3 (scart 3)
P2-7	In MG3.1E, RGB 1FH/Front UI
P50_OUT	Easy link data line from scart
PCB	Printed Circuit board
PD	Power Down
PICNIC	Picture Inproved Combined Network IC
PILOT	Pilot Signal
PILOTMUTE	Pilot Mute signal
PIP	Picture In Picture
PIP-B	Picture In picture Blue
PIP-FBL	PIP Fast Blanking
PIP-G	Picture In Picture Green
PIP-R	Picture In Picture Red
POPOV	Double Window/PIP IC
POWER-DOWN MUTE	Power Down Mute
POWER-ON MUTE	Power On Mute
R	Right Audio
RAM	Random Access Memory
RC5	RC5 signal from the remote control receiver
RESET	Reset signal
RESET-AUDIO	Reset signal for audio IC MSP3410
RESET-AUDIO-INV	Reset signal for audio IC MSP3410 inverted
RESET-FLASH	Reset signal flash memory
RF	Right output (no companding)
RIGHT	Right
RIGHT_DOWNMIX	Right Downmix
RIGHT_IN	Right In
RIGHT_OUT	Right out
ROM	Read Only Memory
R-SC1-IN	Red scart1 in
R-TXT	Red teletext
R-vc	Red from video-controller
S/C	Short Circuit
SAM	Service Alignment Mode
SC2-B-IN	Scart2 blue in
SC2-C-IN	Scart2 chrominance in
SC2FH_IFH	Sand-castle 1FH/2FH
SC2-G-IN	Scart2 green in
SC2-R-IN C-I	Red in scart2 or chrominance in
Scavem	Scan Velocity Modulation
SCAVEM-SW	Scavem- switc
SCL-F	Clock line of the I2C-bus fast (for TXT)
SCL-S	Clock line of the I2C-bus slow
SDA-F	Data line of the I2C-bus fast (for TXT)
SDA-S	Data line of the I2C-bus slow
SDM	Service Default Mode
SEL_SOFAC_0	Selection-signal for SOFAC 0
SEL_SOFAC_1	Selection-signal for SOFAC 1
SEL_TO-MCS_LR	Selection switch MCS Left Right
SELECT TO EXT2	Selection of Extern 2 input
SELECT_TO_CORDL_1	Selection signal for Cordless 1
SELECT_TO_MCS_CINCH_0	Selection-signal for MCS Cinch 0
SELECT_TO_MCS_CINCH_1	Selection-signal for MCS Cinch 1
SELECT-AUDIO CINCH1	Selection of audio via cinch input 1
SELECT-AUDIO-CINCH2	Selection of audio via cinch input 2
SELECT-AUDIO-LR	Selection of audio left and right
SELECT-TO_CORDL_0	Selection signal for Cordless 0
SERVICE-DEFAULT	Service pin to activate SDM
SERVICE-MODE	Service pin to activate SAM
SIF	Sound Intermediate frequency
SIFM	Sound intermediate frequency (Mono)
SL	Surround Left
SL-ST	Sliding stereo of the Stereo Demodulator IC TDA1578A
SNDL-CL_VL-OUT	Sound left constant level -variable level out
SNDL-CL-VL-OUT	Sound L constant level, variable level out
SNDL-FRONT-I	Sound left front in
SNDL-HEADPH-OUT	Sound left headphone out
SNDL-SC1-IN	Sound left scart1 in
SNDL-SC1-OUT	Sound left scart1 out
SNDL-SC2-IN	Sound left scart2 in
SNDL-SC2-OUT	Sound left scart2 out
SNDL-SC3-IN	Sound left scart3 in
SNDL-SC4-IN	Sound left scart4 in
SNDL-UI-IN	Sound left UI IN

SNDR-CL-VL-OUT	Sound R constant level, variable level out
SNDR-FRONT-IN	Sound right front in
SNDR-HEADPH-OUT	Sound right headphone out
SNDR-SC1-IN	Sound right scart1 in
SNDR-SC1-OUT	Sound right scart1 out
SNDR-SC2-IN	Sound right scart2 out
SNDR-SC2-OUT	Sound right scart2 out
SNDR-SC3-IN	Sound right scart3 in
SNDR-SC4-IN	Sound Right scart4 IN
SNDR-SC4-IN	Sound right scart4 in
SNDS-CL-VL-OUT	Sound surround constant level, variable level out
SNDS-VL-OUT	Surround sound left variable level out
SNDS-VR-OUT	Surround sound right variable level out
SOFAC	Sound and Fading Control
SOUND L-HEADPHONE-OUT	Sound left headphone out
SOUND R-HEADPHONE-OUT	Sound right headphone out
SOUND-ENABLE	Sound Enable
SOUND-SELECT	Sound signal Selection
SPDIF	Sony Philips Digital Interface Format
SPDIF_IN1	SPDIF In 1
SPDIF_IN2	SPDIF In 2
SS LEFT	Surround Left
SS RIGHT	Surround Right
SSP	Small Signal Panel
STANDARD-FM-1	Standard Frequency Modulation 1
STANDARD-FM-2	Standard Frequency Modulation 2
STANDBY	Standb
STATUS1/2/3	Status signal from Euro-connector 1 or 2 or 3 to the P, signal (1.29-3.31V is 16:9 signal, 3.32-5.0V is 4:3 signal)
STBY	Standb
STEREO	Stereo
SUBCAR	Subcarrier
SUB-H	Horizontal Sync Sub-TV-Program (via FDS)
SUB-V	Vertical Sync Sub-TV-Program (via FDS)
SUBWOOFER	Subwoofer speaker
SURROUND-LEFT	Surround Left
SURROUND-RIGHT	Surround Right
SW	Subwoofe
SYNC-SELECT	Synchronisation selection
TOPIC	The Outmost Picture Improvement IC
TRIG	Triggering
TUNED	Tuned-flag coming from the IF-IC TDA1597
UB-DEC	U-input for FDS
U-DEC	U-dec (input signal for PICNIC)
U-DS-1FH	U Dual Screen 1 X Horizontal Frequency
U-DS-2FH	U dual Sound 2 X Horizontal Frequency
U-DS-OUT	U Dual Screen out
UF-DEC	U-MAIN input POPOV IC
U-FEAT	U-feature-box (output signal fro PICNIC)
UF-SUB	U-SUB input POPOV IC
UI	Universal Interface
U-OUT	U-signal to HOP IC
U-SUB	U-output of HIP-IC on FDS
VA	Vertical Acquisition
VA1	Vertical Sync (diversity)
VB-DEC	V-input for FDS
VD	Vertical Drive coming from PICNIC
VD-D	Vertical sync to FDS
V-DEC	V-dec (input signal for PICNIC)
VDEFL-1	Vertical deflection connection 1
VDEFL-2	Vertical deflection connection 2
VDNEG	Negative vertical drive signal
VDPOS	Positive vertical drive signal
+VD-switched	Only for VGA sets (VD-switched i.s.o. Vbat.
V-DS-1FH	V Dual Screen 1 X Horizontal Frequency
V-DS-2FH	V Dual Screen 2 X Horizontal Frequency
V-DS-OUT	V Dual Screen out
VFB	Vertical flyback pulse
VF-DEC	V-MAIN input POPOV IC
V-FEAT	V-feature-box (output signal from PICNIC)
VF-SU	V-SUB input POPOV IC
VGA-B	VGA Blue
VGA-FBL	VGA Fast-blanking
VGA-G	VGA Green
VGA-R	VGA Red
VL_L	Variable level Left
VL_R	Variable level Right
VL_SL	Variable level - Surround Left
VL_SR	Variable level - Surround Right
VL_SW	Variable Level Sub-Woofe
VL_SW_DBE	Variable Level - Subwoofer- Dynamic Bass Enhancement
VLL_C	Variable level Center
V-OUT	V-signal to HOP-IC
VOUT_C	V-out Center
VOUT_L	V-out Left
VOUT_R	V-out Right
VOUT_SL	V-out Surround Left
VOUT_SR	V-out Surround Right
VOUT-SW	V-out Subwoofe
VREG	Opto-coupler feedback signal
VS-DS	Main, Vertical sync input POPOV IC
V-SUB	V-output of HIP-IC on FDS
WIRED BACKUP-INFO	Wired back up information
WIRED-BACKUP AUDIO INFO	Audio signal (surround)
WIRELESS SURROUND RECEIVER	Wireless Surround receiver
WIRELESS TRANSMITTER	Wireless Transmitter
X-RAY-PROT	X-Ray Protection
X-tal	Crystal
Y_CVBS-SC2-	Luminance or CVBS scart2 in
YB-DEC	Y-input for FDS
Y-DEC	Luminance-dec (input signal for PICNIC)
Y-DS-1FH	y Dual Screen 1 X Horizontal Frequency
Y-DS-2FH	Y-Dual Screen 2 x Horizontal Frequency
Y-DS-OUT	Y Dual Screen out
YF-DEC	Y-MAIN input POPOV IC
Y-FEAT	Luminance -feature-box (output signal from PICNIC)
YF-SU	Y-SUB input POPOV IC
Y-OUT	Luminance-signal to HOP-IC
Y-SUB	Y-output of HIP-IC on FDS
YUV-SELECT-2FH	YUV selection 2 X Horizontal Frequency

10. Spare parts list

Large Signal Panel [A2] [A3] [A4]

Various

	3104 301 07723	Cable 11P 340mm
	3104 301 07815	Cable 2/3P 560mm
	3104 301 08332	Cable 7P 340mm
	3104 301 08671	Cable 2/3P 220mm
	3104 301 08682	Cable 7P 180mm
	3104 301 08752	Cable 9P 560mm
	3104 301 08762	Cable 5P 400mm
	3104 301 08772	Cable 11P 340mm
	3104 301 09611	Cable 9P 340mm
	3104 304 19583	LSP bracket
	3104 304 20263	LOT support bracket
	3104 311 00321	Cable 2/3P 560mm
	3104 317 70791	EHT cable 640mm
	3104 317 79573	EHT cable 590mm
	3104 328 01011	LSP 28WS
	3104 328 01031	LSP 32WS
	3104 328 01051	LSP 29SF
	4822 320 12504	Cable 3P 560mm
	4822 320 20216	Focus cable
	3104 301 22172	Spring short
	3122 121 24785	Spring
	3104 301 23611	Spring
0303	4822 267 10774	2P male red
0304	4822 265 20723	2P male
0311	4822 267 10978	7P male black
0315	4822 267 10979	9P male black
0317	4822 265 20723	2P male
0320	4822 267 10974	9P male black
0321	4822 267 10978	7P male black
0324	4822 267 10972	5P male black
0325	4822 267 10967	3P male v
0328	4822 267 10962	11P male v
0328	4822 267 10981	11P male v
0335	4822 267 10969	3P male v red
0336	4822 267 10967	3P male black
0337	4822 267 10967	3P male black
0338	4822 267 11043	3P male yellow
0339	4822 267 10971	5P male v
0390	4822 267 10963	3P male v
0393	4822 267 10971	5P male v
1010	3104 328 01011	LSP 28" WS
1010	3104 328 01031	LSP 32" WS
1010	3104 328 01051	LSP 29"
1460▲	4822 252 51186	Fuse 2A

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2400	4822 124 11575	47µF 20% 160V
2401	4822 121 43343	4.7nF 10% 400V
2409	4822 126 12726	47pF 5% 50V
2410	2222 462 90009	4.7nF 2% 250V
2412	5322 121 42489	33nF 5% 250V
2413	5322 124 40641	10µF 20% 100V
2414	5322 121 42489	33nF 5% 250V
2415	5322 122 32334	220pF 10% 100V
2417	4822 121 42408	220nF 5% 63V
2418	4822 126 12263	220pF 10% 2KV
2419	5322 121 44151	33nF 10% 400V
2420	4822 121 70594	1nF 5% 2KV
2421	4822 121 42634	560nF 5% 250V
2422	4822 121 10805	1.2µF 5% 250V
2425	4822 121 70435	10nF 5% 2KV
2426	4822 121 10551	27nF 5% 630V
2426	4822 121 10658	24nF 5% 630V
2431	4822 126 12638	6.8nF 10% 50V
2433	2022 333 00085	390nF 5% 250V
2433	4822 121 42634	560nF 5% 250V
2433	4822 121 51653	430nF 5% 250V
2436	4822 124 41584	100µF 20% 10V
2437	4822 124 41741	2.2µF 20% 350V
2438	4822 122 33449	47nF 30% 50V
2439	4822 126 12638	6.8nF 10% B 50V
2442	4822 124 12297	4.7µF 20% 350V
2448	2020 300 90572	8.2nF 10% 50V
2448	4822 121 41935	12nF 5% 250V
2448	4822 121 51093	6.8nF 5% 250V
2450	4822 121 40518	100nF 10% 250V
2454	5322 121 42386	100nF 5% 63V
2455	4822 121 43897	1nF 5% 400V
2460	4822 122 31177	470pF 10% 500V
2461	4822 124 11909	470µF 20% 25V
2462	4822 124 81039	3300µF 20% 25V
2463	4822 122 31177	470pF 10% 500V
2465	4822 122 31177	470pF 10% 500V
2466	4822 124 11909	25V 470µF 20%
2480	4822 124 40763	2.2µF 100V
2481	5322 122 32311	470pF 10% 100V
2482	4822 124 22466	1µF 20% 50V
2484	4822 124 40769	4.7µF 20% 100V
2487	4822 124 40248	10µF 20% 63V
2506	4822 121 10711	100nF 20% 275V
2612	5322 122 32311	470pF 10% 100V
2613	5322 122 32311	470pF 10% 100V
2615	4822 124 40255	100µF 20% 63V
2616	5322 121 42386	100nF 5% 63V
2617	4822 121 42408	220nF 5% 63V
2618	5322 121 42386	100nF 5% 63V
2620	5322 124 40641	10µF 20% 100V
2701	5322 121 42386	100nF 5% 63V
2702	5322 122 32261	4.7nF 10% 100V
2704	4822 124 40248	10µF 20% 63V
2705	4822 122 33642	150pF 5% 50V
2705	5322 121 42386	100nF 5% 63V
2711	5322 121 42386	100nF 5% 63V
2712	5322 122 32261	4.7nF 10% 100V
2714	4822 122 10182	100pF 5% 50V
2715	5322 122 32332	1.5nF 10% 100V
2730	4822 124 40248	10µF 20% 63V
2732	4822 124 12392	47µF 20% 16V
2733	5322 121 42386	100nF 5% 63V
2738	4822 122 10182	100pF 5% 50V
2739	4822 122 10182	100pF 5% 50V
2740	4822 121 42408	220nF 5% 63V
2741	4822 121 42408	220nF 5% 63V
2742	4822 121 42408	220nF 5% 63V
2742	4822 121 43526	47nF 5% 250V
2743	4822 126 13461	680pF 10% 50V
2743	5322 122 32332	1.5nF 10% 100V
2744	4822 121 43526	47nF 5% 250V
2745	4822 126 13461	680pF 10% 50V
2746	4822 121 43526	47nF 5% 250V
2747	4822 121 43526	47nF 5% 250V
2748	4822 121 43526	47nF 5% 250V
2749	4822 121 43526	47nF 5% 250V
2750	4822 121 42408	220nF 5% 63V
2751	4822 121 42408	220nF 5% 63V
2752	4822 124 21913	1µF 20% 63V
2753	5322 121 42661	330nF 5% 63V
2753	5322 122 32332	1.5nF 10% 100V
2754	4822 121 41854	150nF 5% 63V
2754	4822 121 42408	220nF 5% 63V
2755	4822 126 13461	680pF 10% 50V
2755	5322 122 32332	1.5nF 10% 100V
2756	4822 121 43526	47nF 5% 250V
2757	4822 121 43526	47nF 5% 250V
2758	4822 121 43526	47nF 5% 250V
2759	4822 121 43526	47nF 5% 250V
2760	4822 121 42408	220nF 5% 63V
2761	4822 121 42408	220nF 5% 63V
2762	4822 124 21913	1µF 20% 63V
2763	5322 122 32332	1.5nF 10% 100V
2764	4822 124 21913	1µF 20% 63V
2765	5322 122 32332	1.5nF 10% 100V
2766	4822 121 43526	47nF 5% 250V
2767	4822 121 43526	47nF 5% 250V
2768	4822 121 43526	47nF 5% 250V
2769	4822 121 43526	47nF 5% 250V
2770	4822 121 43526	47nF 5% 250V
2771	4822 121 42408	220nF 5% 63V
2774	4822 121 42408	220nF 5% 63V
2775	5322 122 32332	1.5nF 10% 100V
2776	4822 121 43526	47nF 5% 250V
2777	4822 121 43526	47nF 5% 250V
2778	4822 121 43526	47nF 5% 250V
2779	4822 121 43526	47nF 5% 250V
2780	4822 124 21913	1µF 20% 63V
2790	4822 124 80061	1000µF 20% 25V
2791	4822 124 80061	1000µF 20% 25V
2792	5322 121 42386	100nF 5% 63V
2793	5322 121 42386	100nF 5% 63V
2794	4822 124 40248	10µF 20% 63V
2795	4822 124 40248	10µF 20% 63V

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3401	4822 053 12479	47Ω 5% 3W
3404	4822 116 83883	470Ω 5% 0.5W
3406	4822 116 52175	100Ω 5% 0.5W
3407	4822 050 21003	10k 1% 0.6W
3411	4822 116 52195	47Ω 5% 0.5W
3413	4822 116 83883	470Ω 5% 0.5W
3414	4822 116 52226	560Ω 5% 0.5W
3415	4822 053 12229	22Ω 5% 3W
3417	4822 116 52176	10Ω 5% 0.5W
3423	4822 053 10688	6Ω8 5% 1W
3425	4822 116 52176	10Ω 5% 0.5W
3426	4822 116 52176	10Ω 5% 0.5W
3428	4822 116 52245	150k 5% 0.5W
3429	4822 116 83884	47k 5% 0.5W
3431▲	4822 052 10101	100Ω 5% 0.33W
3432	4822 116 83884	47k 5% 0.5W
3436	4822 116 52269	3k3 5% 0.5W
3437	4822 116 52245	150k 5% 0.5W
3438	4822 050 23303	33k 1% 0.6W
3440	4822 050 23303	33k 1% 0.6W
3441	4822 116 52272	330k 5% 0.5W
3442	4822 116 83874	220k 5% 0.5W
3443▲	4822 052 11688	6Ω8 5% 0.5W
3444	4822 050 23303	33k 1% 0.6W
3445	4822 116 83883	470Ω 5% 0.5W
3446	4822 116 83883	470Ω 5% 0.5W
3447▲	4822 052 10229	22Ω 5% 0.33W
3448	4822 116 52234	100k 5% 0.5W
3449	4822 116 52176	10Ω 5% 0.5W
3450	4822 116 83884	47k 5% 0.5W
3451	4822 116 52264	27k 5% 0.5W
3452	4822 116 52257	22k 5% 0.5W
3453	4822 116 80176	1Ω 5% 0.5W
3454	4822 116 52291	56k 5% 0.5W
3455	4822 116 83874	220k 5% 0.5W
3457	4822 050 13904	390k 1% 0.4W
3457	4822 116 52292	560k 5% 0.5W
3457	4822 116 52298	680k 5% 0.5W
3458	4822 050 11204	120k 1% 0.4W
3458	4822 116 83874	220k 5% 0.5W
3459	4822 116 83883	470Ω 5% 0.5W
3462▲	4822 052 11108	1Ω 5% 0.5W
3463▲	4822 052 11108	1Ω 5% 0.5W
3466▲	4822 052 10108	1Ω 5% 0.33W
3468▲	4822 052 10151	150Ω 5% 0.33W
3478	4822 116 83872	220Ω 5% 0.5W
3480	4822 116 52291	56k 5% 0.5W
3480	4822 116 52297	68k 5% 0.5W
3481▲	4822 052 10102	1k 5% 0.33W
3483▲	4822 052 10478	4Ω7 5% 0.33W
3484▲	4822 052 10109	10Ω 5% 0.33W
3484▲	4822 052 10478	4Ω7 5% 0.33W
3485	4822 050 25605	5M6 1% 0.6W
3485	4822 050 27505	7M5 1% 0.6W
3486	4822 116 52234	100k 5% 0.5W
3488	4822 050 11002	1k 1% 0.4W
3489	4822 116 52191	33Ω 5% 0.5W
3490	4822 116 83874	220k 5% 0.5W
3491	4822 116 83874	220k 5% 0.5W
3492	4822 050 23303	33k 1% 0.6W
3493	4822 050 11002	1k 1% 0.4W
3498	4822 116 83872	220Ω 5% 0.5W
3506	4822 117 12027	18Ω-3k 25%
3507	4822 117 12027	18Ω-3k 25%
3601	4822 116 80176	1Ω 5% 0.5W
3601	4822 116 80676	1Ω5 5% 0.5W
3602	4822 116 80176	1Ω 5% 0.5W
3602	4822 116 80676	1Ω5 5% 0.5W
3603	4822 116 80676	1Ω5 5% 0.5W
3603	4822 116 81039	1Ω8 5% 0.5W
3609▲	4822 052 10472	4k7 5% 0.33W
3610	4822 050 11002	1k 1% 0.4W
3611	4822 050 28201	820Ω 1% 0.6W
3612	4822 050 28201	820Ω 1% 0.6W
3613	4822 050 11002	1k 1% 0.4W
3614	4822 050 11002	1k 1% 0.4W
3617▲	4822 052 10158	1Ω5 5% 0.33W
3618	4822 116 83872	220Ω 5% 0.5W
3619	4822 116 83872	220Ω 5% 0.5W
3620	4822 050 21003	10k 1% 0.6W
3700	4822 050 11002	1k 1% 0.4W
3701	4822 116 52219	330Ω 5% 0.5W
3704	4822 116 52303	8k2 5% 0.5W
3705	4822 116 52244	15k 5% 0.5W
3707	4822 116 52244	15k 5% 0.5W
3707	4822 116 52303	8k2 5% 0.5W
3710	4822 050 11002	1k 1% 0.4W

3711	4822 116 52219	330Ω 5% 0.5W
3714	4822 050 21003	10k 1% 0.6W
3715	4822 050 21003	10k 1% 0.6W
3715	4822 116 52244	15k 5% 0.5W
3716	4822 050 11002	1k 1% 0.4W
3717	4822 116 52175	100Ω 5% 0.5W
3717	4822 116 52249	1k8 5% 0.5W
3720	4822 116 52234	100k 5% 0.5W
3721	4822 116 52234	100k 5% 0.5W
3722	4822 116 52234	100k 5% 0.5W
3723	4822 116 52234	100k 5% 0.5W
3724	4822 116 52234	100k 5% 0.5W
3724	4822 116 83884	47k 5% 0.5W
3725	4822 116 83884	47k 5% 0.5W
3726	4822 116 52234	100k 5% 0.5W
3728	4822 116 52234	100k 5% 0.5W
3729	4822 116 52234	100k 5% 0.5W
3730	4822 116 83883	470Ω 5% 0.5W
3731	4822 116 83884	47k 5% 0.5W
3732	4822 116 83884	47k 5% 0.5W
3733	4822 116 52207	1k2 5% 0.5W
3734	4822 116 52257	22k 5% 0.5W
3735	4822 116 52283	4k7 5% 0.5W
3740	4822 116 83883	470Ω 5% 0.5W
3741	4822 050 23303	33k 1% 0.6W
3741	4822 116 52231	820Ω 5% 0.5W
3742	4822 116 83883	470Ω 5% 0.5W
3743	4822 050 23303	33k 1% 0.6W
3744	4822 117 12798	8Ω2 5% 0.25W
3745	4822 117 12798	8Ω2 5% 0.25W
3746	4822 116 52276	3k9 5% 0.5W
3747	4822 116 52276	3k9 5% 0.5W
3750	4822 116 52276	3k9 5% 0.5W
3751	4822 116 52291	56k 5% 0.5W
3752	4822 116 52269	3k3 5% 0.5W
3752	4822 116 83883	470Ω 5% 0.5W
3753	4822 116 52249	1k8 5% 0.5W
3753	4822 116 83961	6k8 5%
3754	4822 117 12798	8Ω2 5% 0.25W
3755	4822 117 12798	8Ω2 5% 0.25W
3760	4822 116 52257	22k 5% 0.5W
3760	4822 116 83883	470Ω 5% 0.5W
3761	4822 116 52276	3k9 5% 0.5W
3761	4822 116 83961	6k8 5%
3762	4822 116 83883	470Ω 5% 0.5W
3763	4822 116 83961	6k8 5%
3764	4822 117 12798	8Ω2 5% 0.25W
3765	4822 117 12798	8Ω2 5% 0.25W
3772	4822 116 83883	470Ω 5% 0.5W
3773	4822 116 52231	820Ω 5% 0.5W
3774	4822 117 12798	8Ω2 5% 0.25W
3775	4822 117 12798	8Ω2 5% 0.25W
3780	4822 116 52289	5k6 5% 0.5W
3781	4822 116 52289	5k6 5% 0.5W
3782	4822 116 52289	5k6 5% 0.5W
3783	4822 116 52289	5k6 5% 0.5W
3785	4822 116 52263	2k7 5% 0.5W
3786	4822 116 52269	3k3 5% 0.5W
3787	4822 050 21003	10k 1% 0.6W
3790	4822 116 52234	100k 5% 0.5W
3791	4822 116 52234	100k 5% 0.5W

5400	4822 157 71467	39µH 10%
5401	4822 157 71452	18µH 10%
5410	3128 138 36851	Line driver transf.
5421	3128 138 52581	Linearuty corr.
5421	3128 138 52561	Linearity corr. 29"
5422	4822 146 11137	Bridge coil
5422	2422 531 02357	Bridge coil 29"
5423	4822 157 71097	0.56µH
5425	4822 157 11411	Bead 100MHz
5426	4822 157 11411	Bead 100MHz
5430	2422 531 02365	LOT
5460	4822 157 71466	2.2µH 20%
5462	4822 157 71466	2.2µH 20%
5466	4822 157 71452	18µH 10%
5468	4822 157 71452	18µH 10%
5480	3128 138 30972	Choke
5501	4822 157 11422	12µH 10%
5502	4822 157 11422	12µH 10%
5617	4822 157 11771	0.09µH 10%
5701	4822 157 11299	10µH 5%
5702	4822 157 11299	10µH 5%

6407	4822 130 42488	BYD33D
6408	4822 130 42488	BYD33D
6410	4822 130 30621	1N4148
6421	4822 130 10753	BY359X-1500
6422	4822 130 10218	BY229X-800
6437	4822 130 30621	1N4148
6441	4822 130 42488	BYD33
6451	4822 130 34382	BZX79-B8V2
6452	4822 130 30621	1N4148
6453	4822 130 34142	BZX79-B33
6454	4822 130 30842	BAV21
6460	4822 130 41487	BYV95C
6462	4822 130 41487	BYV95C
6463	4822 130 41487	BYV95C
6480	4822 130 61219	BZX79-B10
6483	4822 130 30842	BAV21
6484	4822 130 30621	1N4148
6485	4822 130 30621	1N4148
6486	4822 130 30621	1N4148
6608	4822 130 34174	BZX79-B4V7
6609	4822 130 31983	BAT85
6610	4822 130 30621	1N4148
6614	5322 130 31938	BYV27-200
6617	4822 130 42488	BYD33
6618	5322 130 33635	BZV85-C8V2
6620	4822 130 42488	BYD33
6790	5322 130 34563	BZX79-C2V7
6791	5322 130 34563	BZX79-C2V7

7409	4822 130 40959	BC547B
7411	5322 130 44349	BC635
7421	4822 130 63666	BU2520DF
7437	4822 130 44568	BC557B
7440	4822 209 70672	LM358N SEL.
7441	4822 130 40959	BC547B
7442	4822 130 44568	BC557B
7480	4822 130 11336	STP16NE06FP
7484	4822 209 70672	LM358N SEL.
7600	4822 209 90009	TDA8177
7700	4822 209 83163	LM833N
7710	5322 209 86445	LM7805CT
7720	4822 209 11079	MC79M05CT
7730	4822 130 44568	BC557B
7731	4822 130 40959	BC547B
7732	4822 130 40959	BC547B
7733	4822 130 40959	BC547B
7740	4822 209 32641	TDA2616Q
7750	4822 209 32641	TDA2616Q
7760	4822 209 32641	TDA2616Q
7770	4822 209 32641	TDA2616Q
7780	4822 130 40959	BC547B

Power Supply panel [B]

Various

	3104 304 19651	Power supply frame
1001	3104 328 01111	Power supply panel WS
1001	3104 328 02181	Power supply panel 29"
0051	3104 304 90261	Isulator
0052	3122 121 24785	Spring
0150	4822 265 11253	Fuse holder
0151	4822 265 11253	Fuse holder
0302	2422 025 16374	2P male v black
0304	4822 265 20723	2P
0310	4822 267 10964	9P
0320	4822 267 10974	9P
0321	4822 267 10978	7P
0330	2422 025 14904	7P male v/description>
1001▲	4822 253 30467	Fuse 6,3A
1002▲	4822 280 10375	Relay 1P 5V 10A
1003▲	4822 070 33152	Fuse 3.15A
1005	4822 252 60151	Surge protect
1007	4822 280 80777	Relay 2P 12V 5A

2000	4822 126 13589	470nF 275V
2004	4822 126 14153	2.2nF 10% 1KV
2005	4822 126 14153	2.2nF 10% 1KV
2007	4822 121 41857	10nF 5% 250V
2009	4822 121 41857	10nF 5% 250V
2100	4822 124 12295	4.7µF 20% 450V
2101	5322 122 32818	2.2nF 10% 100V
2102	5322 121 42498	680nF 5% 63V
2104	4822 123 14025	2200µF 20% 16V
2105	5322 122 32818	2.2nF 10% 100V
2201	4822 124 12359	330µF 20% 400V
2202	4822 124 80144	220µF 20% 25V
2203	4822 124 80144	220µF 20% 25V
2204	5322 121 51214	680pF 1% 400V
2205	4822 121 51288	100pF 630V
2207	4822 121 41854	150nF 5% 63V
2208	5322 121 42386	100nF 5% 63V
2210	4822 126 13451	2.2nF 10% 2KV
2211	2222 375 90224	39nF 5% 1KV
2212	4822 126 13862	1.5nF 10% 2KV
2213	4822 126 13862	1.5nF 10% 2KV
2214▲	4822 126 14504	3.3nF 20% 250V
2215	4822 122 30043	10nF 80% 63V
2216	5322 121 42386	100nF 5% 63V
2217	4822 124 40207	100µF 20% 25V
2218	4822 124 40255	100µF 20% 63V
2219	4822 122 30043	10nF 80% 63V
2220	4822 124 80707	2200µF 20% 25V
2221	4822 124 80707	2200µF 20% 25V
2222	4822 124 40214	1000µF 20% 25V
2223	4822 124 11572	47µF 20% 160V
2225	5322 122 32331	1nF 10% 100V
2226	5322 121 42386	100nF 5% 63V
2227	4822 122 31169	1.5nF 10% 500V
2228	4822 124 81151	22µF 50V
2230	4822 124 11878	4700µF 16V.
2231	4822 121 41854	150nF 5% 63V
2232	4822 122 30043	10nF 80% 63V
2233	4822 122 30043	10nF 80% 63V
2234	4822 124 80061	1000µF 20% 25V
2235	5322 122 32331	1nF 10% 100V
2236	4822 124 11767	470µF 20% 25V
2237	4822 122 31175	1nF 10% 500V
2238	5322 121 42386	100nF 5% 63V
2239	4822 121 42062	150 nF 10% 400V
2240	5322 122 32261	4.7nF 10% 100V
2241	4822 122 30043	10nF 80% 63V
2242	4822 122 33449	47nF 30% 50V
2244	4822 126 12263	220pF 10% 2KV
2246	4822 122 31175	1nF 10% 500V
2246	4822 122 31177	470pF 10% 500V
2250	5322 122 32331	1nF 10% 100V
2251	4822 121 51305	15nF 10% 50V
2252	5322 122 32818	2.2nF 10% 100V
2253	4822 121 51252	470nF 5% 63V
2260	4822 122 30103	22nF 80% 63V
2261	4822 126 10206	2.2nF 10% 500V
2262	4822 126 10206	2.2nF 10% 500V
2263	5322 122 32311	470pF 10% 100V
2264	5322 122 32311	470pF 10% 100V
2271	5322 122 32331	1nF 10% 100V
2272	5322 122 32331	1nF 10% 100V
2274	4822 122 31175	1nF 10% 500V
2275	4822 122 31175	1nF 10% 500V
2276	5322 122 32331	1nF 10% 100V
2277	5322 122 32818	2.2nF 10% 100V

3001▲	4822 116 10065	VDR 1mA/495V MAX 850V
3002	4822 117 12181	470Ω 20% 0.5W
3003	4822 116 52256	2k2 5% 0.5W
3004	4822 116 52234	100k 5% 0.5W
3006	4822 117 12074	7W 1Ω5 10%
3007	4822 116 52283	4k7 5% 0.5W
3008	4822 116 52256	2k2 5% 0.5W
3009	4822 050 21003	10k 1% 0.6W
3101	4822 053 20106	10M 5% 0.25W
3102	4822 050 11002	1k 1% 0.4W
3103	4822 050 21003	10k 1% 0.6W
3106	4822 116 52256	2k2 5% 0.5W
3107	4822 116 52256	2k2 5% 0.5W
3108	4822 116 52182	15Ω 5% 0.5W
3109	4822 050 21003	10k 1% 0.6W
3110▲	4822 052 10109	10Ω 5% 0.33W
3113	4822 050 24701	470Ω 1% 0.6W
3114	4822 050 21201	120Ω 1% 0.6W
3115	4822 116 52228	680Ω 5% 0.5W
3117	4822 116 52195	47Ω 5% 0.5W
3118	4822 116 52182	15Ω 5% 0.5W
3200▲	4822 052 10478	4Ω7 5% 0.33W
3200▲	4822 052 10569	56Ω 5% 0.33W
3202	4822 116 52303	8k2 5% 0.5W
3203	4822 050 23903	39k 1% 0.6W
3204	4822 116 52264	27k 5% 0.5W
3205	4822 116 52289	5k6 5% 0.5W
3206	4822 050 21003	10k 1% 0.6W
3207	4822 050 21003	10k 1% 0.6W
3208	4822 116 83883	470Ω 5% 0.5W
3209	4822 116 52269	3k3 5% 0.5W

3210	4822 116 83883	470Ω 5% 0.5W
3211	4822 116 83883	470Ω 5% 0.5W
3214▲	4822 052 10101	100Ω 5% 0.33W
3215▲	4822 052 10479	47Ω 5% 0.33W
3216	4822 050 11002	1k 1% 0.4W
3217▲	4822 052 10101	100Ω 5% 0.33W
3218▲	4822 052 10479	47Ω 5% 0.33W
3219	4822 050 11002	1k 1% 0.4W
3221	4822 052 10109	10Ω 5% 0.33W
3222	4822 116 52249	1k8 5% 0.5W
3223	4822 116 52249	1k8 5% 0.5W
3224	4822 116 52249	1k8 5% 0.5W
3227	4822 052 10129	12Ω 5% 0.33W
3228	2322 257 41153	15K 5% 5W
3229	4822 116 52175	100Ω 5% 0.5W
3230	4822 116 52234	100k 5% 0.5W
3231	4822 116 52234	100k 5% 0.5W
3232	4822 116 83961	6k8 5%
3233	4822 050 11002	1k 1% 0.4W
3234	4822 116 52175	100Ω 5% 0.5W
3235	4822 116 52207	1k2 5% 0.5W
3236	4822 116 52303	8k2 5% 0.5W
3237	4822 050 21604	160k 1% 0.6W
3238	4822 050 22702	2k7 1% 0.6W
3239	4822 101 11186	470Ω 30%LIN 0.1W
3240	4822 116 52226	560Ω 5% 0.5W
3241	4822 116 52226	560Ω 5% 0.5W
3242	4822 050 24703	47k 1% 0.6W
3243	4822 050 25603	56k 1% 0.6W
3244	4822 050 21003	10k 1% 0.6W
3245	4822 116 83882	39k 5% 0.5W
3246	4822 116 52231	820Ω 5% 0.5W
3246	4822 116 83961	6k8 5%
3247	4822 116 52175	100Ω 5% 0.5W
3248	4822 116 52219	330Ω 5% 0.5W
3249	4822 050 21003	10k 1% 0.6W
3250	4822 050 28204	820k 1% 0.6W
3251	4822 050 26804	680k 1% 0.6W
3252	4822 050 21003	10k 1% 0.6W
3253	4822 116 52244	15k 5% 0.5W
3254	4822 050 21003	10k 1% 0.6W
3255	4822 116 83961	6k8 5%
3256	4822 050 21003	10k 1% 0.6W
3257	4822 116 52213	180Ω 5% 0.5W
3258	4822 053 20565	5M6 5% 0.25W
3259	4822 116 52244	15k 5% 0.5W
3260	4822 050 21508	1Ω5 1% 0.6W
3260	4822 050 24708	4Ω7 1% 0.6W
3261	4822 116 52297	68k 5% 0.5W
3262	4822 116 52234	100k 5% 0.5W
3263	4822 050 22208	2Ω2 1% 0.6W
3263	4822 050 26808	6Ω8 1% 0.6W
3264	4822 050 11002	1k 1% 0.4W
3265	4822 050 11002	1k 1% 0.4W
3266	4822 050 21003	10k 1% 0.6W
3267	4822 116 52256	2k2 5% 0.5W
3268	4822 050 21508	1Ω5 1% 0.6W
3268	4822 050 24708	4Ω7 1% 0.6W
3269	4822 050 21508	1Ω5 1% 0.6W
3269	4822 050 24708	4Ω7 1% 0.6W
3274	4822 116 52195	47Ω 5% 0.5W
3998	4822 050 21003	10k 1% 0.6W
9281	4822 050 21001	100Ω 1% 0,6W

5000	3104 308 77931	Mains filter DMF3547HB60
5101▲	4822 146 11065	Standby transf. CE165T
5102	4822 157 70436	8.2µH 10%
5103	4822 157 71466	2.2µH 20%
5201	8222 289 53691	Driver transf. CE136H
5202	3122 268 32481	Transformer
5202	8222 289 55771	Transformer 29"
5204	2422 531 02383	Transformer
5205	3198 018 74780	4.7µH 20%
5206	4822 157 11411	Bead 100MHz
5207	4822 157 11411	Bead 100MHz
5208	4822 157 63985	33µH 5%
5209	4822 157 11411	Bead 100MHz
5210	4822 157 51462	10µH 10%
5212	4822 157 11411	Bead 100MHz
5213	4822 157 11411	Bead 100MHz
5214	4822 157 11771	0.09µH 10%
5219	4822 157 11411	Bead 100MHz
5222	4822 157 71453	27µH 10%
5223	4822 157 71453	27µH 10%
5224	4822 157 71453	27µH 10%
5225	4822 157 11411	Bead 100MHz
5226	4822 157 11411	Bead 100MHz
5227	4822 157 11411	Bead 100MHz
5228	4822 157 11411	Bead 100MHz
5240	4822 157 11411	Bead 100MHz
5241	4822 526 10704	Bead 100MHz
5242	4822 526 10704	Bead 100MHz
5243	4822 526 10704	Bead 100MHz
5244	4822 526 10704	Bead 100MHz
5271	4822 157 71453	27µH 10%
5272	3198 018 74780	4.7µH 20%
5273	4822 157 71453	27µH 10%
5274	4822 157 11869	33µH 10%
5275	4822 157 11411	Bead 100MHz

6004	4822 130 31083	BYW55
6005	4822 130 31083	BYW55
6006	4822 130 31083	BYW55
6007	4822 130 31083	BYW55
6009	4822 130 30621	1N4148
6101	4822 130 83147	DF06M
6103	4822 130 42488	BYD33D
6104	4822 130 34499	BZX79-B20
6105	4822 130 34281	BZX79-B15
6107	5322 130 31938	BYV27-200
6108	4822 130 30621	1N4148
6200	4822 130 30621	1N4148
6201	4822 130 30621	1N4148
6202	9337 534 30133	BZD23-C15
6204	4822 130 30621	1N4148
6205	4822 130 30621	1N4148
6206	4822 130 34441	BZX79-B22
6207	4822 130 30621	1N4148
6208	4822 130 30621	1N4148
6209	4822 130 31024	BZX79-B18
6209	4822 130 34268	BZX79-B16
6210	4822 130 42488	BYD33D
6211	4822 130 30621	1N4148
6212	4822 130 30621	1N4148
6214	4822 130 30621	1N4148
6216	4822 130 30621	1N4148
6217	4822 130 30621	1N4148
6218	4822 130 82158	D3SBA60
6219	4822 130 30621	1N4148
6220	4822 130 30621	1N4148
6221	4822 130 34174	BZX79-B4V7
6222	9322 129 53687	UG10DCT
6224	4822 130 82158	D3SBA60
6230	4822 130 82627	SB540
6234	4822 130 34197	BZX79-B12
6235	4822 130 30621	1N4148
6237	4822 130 80791	BYV28-200/20
6238	4822 130 34278	BZX79-B6V8
6239	4822 130 34197	BZX79-B12
6270	4822 130 30621	1N4148
6271	4822 130 30621	1N4148

7000	4822 130 40981	BC337-25
7001	4822 130 40959	BC547B
7100	4822 130 44568	BC557B
7101	4822 130 40959	BC547B
7102	4822 130 11417	STP3NB60FP
7103	4822 130 40959	BC547B
7104▲	4822 130 11418	TCDT1102G
7200▲	4822 130 11418	TCDT1102G
7201	4822 130 40959	BC547B
7202	4822 130 44568	BC557B
7203	4822 130 44568	BC557B
7204	4822 130 44568	BC557B
7205	9322 108 21682	MC34067P
7206	9322 132 14687	STP11NB40FP
7207	9322 132 14687	STP11NB40FP
7211	4822 209 32063	MC34167TV
7212	4822 209 81397	TL431CLPST
7213	4822 209 12334	L4940V85
7230	4822 130 44568	BC557B
7231	4822 130 40959	BC547B
7232	4822 130 11421	BT151X-500R

Mains switch panel [E]

Various

	3104 301 08291	VCable 2/3P 560mm
	3104 304 19810	Lightguide
	3104 328 01151	Mains switch panel
	4822 402 11176	Bracket mains unit
	4822 410 12069	Mains konb
	3104 304 19732	Photo diode holder
	3111 104 48012	LED holder
	3111 104 48012	LED holder
	2422 025 16268	2P male h
	2422 025 16374	2P male v
0241	4822 267 10974	9P
0245	4822 267 10963	3P
1050	4822 130 91478	IR receiverTSOP1736KD1
1051	4822 276 14024	Mains switch 2P 4/128A

2051	4822 124 41584	100µF 20% 10V
2070	4822 126 14076	220nF 20% 25V
2071	4822 124 40248	10µF 20% 63V

3050	4822 117 13577	330Ω 1% 1.25W
3051	4822 051 20471	470Ω 5% 0.1W
3054	4822 051 20561	560Ω 5% 0.1W
3055	4822 051 20008	Jumper 0805
3057	4822 053 21335	3M3 5% 0.5W
3058	4822 051 20474	470k 5% 0.1W
3059	4822 117 11507	6k8 1% 0.1W
3061	4822 051 20332	3k3 5% 0.1W
3063	4822 052 10478	4Ω7 5% 0.33W
3064	4822 052 10478	4Ω7 5% 0.33W
3066	4822 053 21335	3M3 5% 0.5W
3070	4822 051 20334	330k 5% 0.1W
3071	4822 051 20334	330k 5% 0.1W
3072	4822 051 10102	1k 2% 0.25W
3073	4822 117 10833	10k 1% 0.1W
3074	4822 051 20472	4k7 5% 0.1W
3075	4822 051 20472	4k7 5% 0.1W
3076	4822 117 11507	6k8 1% 0.1W
3077	4822 117 10833	10k 1% 0.1W
3078	4822 051 10102	1k 2% 0.25W
3079	4822 051 20332	3k3 5% 0.1W
3080	4822 117 10833	10k 1% 0.1W

6051	4822 209 72895	TLUV5320
6052	4822 130 11409	TSIL6403
6053	4822 130 11411	BZX284-C3V3
6070	4822 130 11595	BPW46

7010	4822 130 60511	BC847B
7050	4822 130 41246	BC327-25

Picture Tube Panel [F]

Various

0041	4822 492 70788	Spring fix IC
0042	4822 492 70788	Spring fix IC
0043	4822 492 70788	Spring fix IC
0224	4822 267 10972	5P
0297	4822 255 10415	CRT socket 9P DAF
0298	2422 500 80054	CRT socket 8P N-NECK
0334	4822 267 10973	1P
0340	4822 267 10974	9P
0383	4822 267 10967	3P
1030	3104 328 02321	PTP 28"-29"
1030	3104 328 02341	PTP 32"
8383	4822 320 12525	Cable 3P 340mm

2325	4822 124 40248	10µF 20% 63V
2330	5322 122 32658	22pF 5% 50V
2331	5322 122 33244	8.2pF 5% 50V
2332	5322 126 10223	4.7nF 10% 63V
2333	4822 122 32535	680pF 10% 63V
2336	4822 126 12105	33nF 5% 50V
2337	5322 121 42489	33nF 5% 250V
2340	5322 122 32658	22pF 5% 50V
2341	5322 122 32269	6.8pF 5% 50V
2342	5322 126 10223	4.7nF 10% 63V
2343	4822 122 32535	680pF 10% 63V

2346	4822 126 12105	33nF 5% 50V
2347	5322 121 42489	33nF 5% 250V
2350	5322 122 32658	22pF 5% 50V
2351	5322 122 32269	6.8pF 5% 50V
2352	5322 126 10223	4.7nF 10% 63V
2353	4822 122 32535	680pF 10% 63V
2356	4822 126 12105	33nF 5% 50V
2357	5322 121 42489	33nF 5% 250V
2370	4822 124 11565	10µF 20% 250V
2372	4822 124 40207	100µF 20% 25V
2381	4822 122 31175	1nF 10% 500V
2393	5322 122 31647	1nF 10% 63V
2397	4822 121 70581	1.5nF 10% 2kV
2398	5322 121 44356	4.7nF 10% 2kV
2400	4822 124 40207	100µF 20% 25V
2401	4822 126 13486	15pF 2% 63V
2402	4822 126 13689	18pF 1% 63V
2403	5322 122 32658	22pF 5% 50V
2404	4822 124 40433	47µF 20% 25V
2405	5322 122 32286	3.3pF 5% 50V
2406	5322 121 42386	100nF 5% 63V
2407	5322 122 31863	330pF 5% 63V
2409	4822 121 70619	22nF 10% 50V
2410	5322 122 32654	22nF 10% 63V
2411	4822 124 40764	22µF 100V
2420	4822 121 41856	22nF 5% 250V
2422	4822 126 13486	15pF 2% 63V

3324	4822 117 10833	10k 1% 0.1W
3325	4822 051 20182	1k8 5% 0.1W
3327	4822 117 10837	100k 1% 0.1W
3329	4822 050 21003	10k 1% 0.6W
3330	4822 117 11449	2k2 1% 0.1W
3331	4822 050 21204	120k 1% 0.6W
3332	4822 117 12955	2k7 1% 0.1W
3333	4822 051 20008	Jumper 0805
3334	4822 116 52175	100Ω 5% 0.5W
3335	4822 117 12516	680Ω 2% 0.5W
3336	4822 051 20561	560Ω 5% 0.1W
3339	4822 050 11002	1k 1% 0.4W
3340	4822 117 11449	2k2 1% 0.1W
3341	4822 050 21204	120k 1% 0.6W
3342	4822 117 12955	2k7 1% 0.1W 0805
3343	4822 051 20008	Jumper 0805
3344	4822 116 52175	100Ω 5% 0.5W
3345	4822 117 12516	680Ω 2%0.5W
3346	4822 051 20561	560Ω 5% 0.1W
3349	4822 050 11002	1k 1% 0.4W
3350	4822 117 11449	2k2 1% 0.1W
3351	4822 050 21204	120k 1% 0.6W
3352	4822 117 12955	2k7 1% 0.1W 0805
3353	4822 051 20008	Jumper 0805
3354	4822 116 52175	100Ω 5% 0.5W
3355	4822 117 12516	680Ω 2% 0.5W
3356	4822 116 52226	560Ω 5% 0.5W
3359	4822 050 11002	1k 1% 0.4W
3360	4822 116 52195	47Ω 5% 0.5W
3363	4822 051 20008	Jumper 0805
3364	4822 051 20008	Jumper 0805
3372▲	4822 052 10688	6Ω8 5% 0.33W
3373▲	4822 052 10331	330Ω 5% 0.33W
3382	4822 116 52191	33Ω 5% 0.5W
3383	4822 117 13016	VDR 1mA/50V MAX 115V
3385	4822 117 13016	VDR 1mA/50V MAX 115V
3386	4822 116 52191	33Ω 5% 0.5W
3396	4822 052 11152	1k5 5% 0.5W
3397	4822 052 11152	1k5 5% 0.5W
3400▲	4822 052 10109	10Ω 5% 0.33W
3401	4822 051 20332	3k3 5% 0.1W
3402	4822 117 12955	2k7 1% 0.1W 0805
3403	4822 117 11449	2k2 1% 0.1W
3404	4822 117 11448	180Ω 1% 0.1W
3405	4822 117 10965	18k 1% 0.1W
3406	4822 117 11449	2k2 1% 0.1W
3407	4822 116 52219	330Ω 5% 0.5W
3408	4822 051 20479	47Ω 5% 0.1W
3409	4822 051 20478	4Ω7 5% 0.1W
3410	4822 051 10102	1k 2% 0.25W
3411	4822 117 11148	56k 1% 0.1W
3412	4822 117 11148	56k 1% 0.1W
3413	4822 051 10102	1k 2% 0.25W
3414	4822 053 12472	4k7 5% 3W
3415	4822 051 20109	10Ω 5% 0.1W
3416	4822 051 20182	1k8 5% 0.1W
3417	4822 051 20109	10Ω 5% 0.1W
3418	4822 117 13577	330Ω 1% RC12H 0805 1.25W
3419	4822 116 52219	330Ω 5% 0.5W
3421	4822 117 10833	10k 1% 0.1W
3422	4822 116 83883	470Ω 5% 0.5W
3999	4822 117 10361	680Ω 1% 0.1W
4xxx	4822 051 10008	0Ω jumper 1206
4xxx	4822 051 20008	0Ω jumper 0805

5336	4822 157 11139	6.8µH 5%
5346	4822 157 11139	6.8µH 5%
5356	4822 157 11139	6.8µH 5%
5372	4822 157 51216	5.6µH 10%
5373	4822 157 51216	5.6µH 10%
5400	4822 157 51216	5.6µH 10%
5404	4822 157 10586	2.2µH 10%

6324	4822 130 30621	1N4148
6325	5322 130 31504	BZX79-B3V3
6335	4822 130 30842	BAV21
6345	4822 130 30842	BAV21
6355	4822 130 30842	BAV21
6373	4822 130 42488	BYD33
6409	4822 130 30621	1N4148
6410	4822 130 30621	1N4148

7324	4822 130 60373	BC856B
7330	4822 209 33365	TDA6111Q/N4
7340	4822 209 33365	TDA6111Q/N4
7350	4822 209 33365	TDA6111Q/N4
7400	4822 130 44154	BF199
7405	4822 130 42589	BF370
7414	5322 130 41888	BD140-16
7415	5322 130 41886	BD139-16

DC-shift panel [G]

Various

0393	4822 267 10976	5P female h
1500	3104 328 00750	DC-shift panel

2030	4822 122 31177	470pF 10% 500V
2031	4822 124 81029	100µF 20% 25V
2032	4822 124 81029	100µF 20% 25V
2033	4822 122 31177	470pF 10% 500V

3030▲	4822 053 11689	68Ω 5% 2W
3031▲	4822 052 10108	1Ω 5% 0.33W
3032▲	4822 052 10108	1Ω 5% 0.33W

5030	4822 157 70006	DC-shift coil

6030	4822 130 42488	BYD33
6033	4822 130 42488	BYD33

Clickfit panel [J]

Various

0201	4822 265 11579	Socket clickfit 4P
0301	2422 025 06353	5P male
2704	4822 122 30043	10nF 80% 63V
2705	4822 122 30043	10nF 80% 63V

Small Signal Panel [K1-8]

Various

0002	4822 267 10977	IC socket 42P
0008	5322 255 40958	IC socket 8P
0031	3104 304 19595	SSP frame
0032	3104 304 19644	Module support bracket
0310	4822 267 10964	9P male red
0311	4822 267 10978	7P male black
0315	4822 267 10979	9P male black
0328	4822 267 10981	11P male black
0333	4822 267 10962	11P male v
0340	4822 267 10974	9P male v
0341	4822 267 10974	9P male v
0344	4822 267 10963	3P male
0351	2422 025 15385	11P male v
0352	4822 267 10962	11P male v
0353	2422 025 15384	9P male v
0356	4822 267 10963	3P male
0361	2422 025 15384	9P male v
0362	2422 025 15384	9P male v
0373	4822 267 10978	7P male v
0381	4822 267 10963	3P male
1001	4822 242 10972	Crystal 6MHz
1020	3104 328 00991	SSP MT EU CF LTP FAL
1020	3104 328 02021	SSP MT CF LTP EPG FAL P+
1101	3139 147 14591	Splitter PS1311/I
1102	3139 147 14121	Tuner UV1316/A P-2
1102	4822 210 10841	Tuner UV1316/A I-2
1105	4822 242 10688	Filter OFWK9456M
1107	4822 242 72211	Filter 5.5MHz
1109	4822 242 81436	Filter OFWK3953M
1198	3104 301 08351	Cable phono-phono 120mm
1200	4822 267 11033	Socket cinch 3P
1201	4822 267 10771	Socket 2 x scart black
1202	4822 267 10771	Socket 2 x scart black
1202	4822 267 60385	Socket 1 x scart black
1305	5322 242 73686	Crystal 12MHz
1525	4822 242 10695	Crystal 4.433 619 MHz
1528	4822 242 10697	Crystal 3.579 545 MHz
1751	4822 242 10434	Crystal 18,432MHz
8310	3104 301 08303	Cable 9P 680mm
8330	3104 301 08952	Cable 7P 820mm

2001	4822 126 14585	100nF 10% 50V
2002	4822 126 14305	100nF 10% 16V 0603
2003	4822 126 14305	100nF 10% 16V 0603
2005	4822 126 14305	100nF 10% 16V 0603
2006	4822 126 14305	100nF 10% 16V 0603
2007	4822 126 14305	100nF 10% 16V 0603
2008	4822 126 14305	100nF 10% 16V 0603
2009	4822 126 14305	100nF 10% 16V 0603
2010	4822 126 14305	100nF 10% 16V 0603
2011	4822 126 14305	100nF 10% 16V 0603
2012	4822 126 14305	100nF 10% 16V 0603
2013	4822 126 14076	220nF 80-20% 25V
2014	4822 126 11669	27pF
2015	4822 126 14585	100nF 10% 50V
2016	5322 122 32659	33pF 5% 50V
2018	4822 124 40248	10µF 20% 63V
2019	4822 126 14305	100nF 10% 16V 0603
2020	5322 122 32658	22pF 5% 50V
2021	4822 126 14585	100nF 10% 50V
2022	4822 126 14076	220nF 80-20% 25V
2023	4822 126 14305	100nF 10% 16V 0603
2024	5322 126 11578	1nF 10% 50V 0603
2025	4822 126 14305	100nF 10% 16V 0603
2026	4822 126 14305	100nF 10% 16V 0603
2027	4822 126 14305	100nF 10% 16V 0603
2028	4822 126 14305	100nF 10% 16V 0603
2029	4822 124 40433	47µF 20% 25V
2030	4822 124 40433	47µF 20% 25V
2031	4822 126 14305	100nF 10% 16V 0603
2032	4822 126 14305	100nF 10% 16V 0603
2035	4822 126 14585	100nF 10% 50V
2037	4822 126 14585	100nF 10% 50V
2038	4822 126 14585	100nF 10% 50V
2039	4822 126 13883	220pF 5% 50V
2040	4822 122 33177	10nF 20% 50V
2042	4822 122 33777	47pF 5% 63V
2043	4822 122 33777	47pF 5% 63V
2044	4822 122 33777	47pF 5% 63V
2045	4822 124 41584	100µF 20% 10V

2046	4822 126 14585	100nF 10% 50V
2049	4822 126 14226	82pF 5% 50V 0603
2050	4822 126 14226	82pF 5% 50V 0603
2051	4822 126 14226	82pF 5% 50V 0603
2052	4822 126 14226	82pF 5% 50V 0603
2053	4822 126 14226	82pF 5% 50V 0603
2054	4822 126 14226	82pF 5% 50V 0603
2101	4822 124 40196	220µF 20% 16V
2102	4822 126 13473	220nF 80-20% 50V
2104	4822 122 33177	10nF 20% 50V
2105	4822 122 33177	10nF 20% 50V
2106	4822 122 33575	220pF 5% 63V CASE
2107	4822 126 13694	68pF 1% 63V
2108	5322 122 31873	2.7pF 5% 100V
2109	4822 124 22652	2.2µF 20% 50V
2110	4822 124 21913	1µF 20% 63V
2111	4822 126 14585	100nF 10% 50V
2112	4822 122 33891	3.3nF 10% 63V
2116	4822 124 41584	100µF 20% 10V
2117	4822 126 13482	470nF 80/20% 16V
2118	5322 122 33244	8.2pF 5% 50V
2119	5322 122 31863	330pF 5% 63V
2120	4822 126 14076	220nF 80-20% 25V
2121	4822 124 41584	100µF 20% 10V
2125	4822 122 33177	10nF 20% 50V
2126	4822 124 40433	47µF 20% 25V
2127	4822 126 14076	220nF 80-20% 25V
2202	5322 122 31863	330pF 5% 63V
2203	5322 122 31863	330pF 5% 63V
2204	4822 126 14305	100nF 10% 16V 0603
2205	4822 124 40248	10µF 20% 63V
2206	5322 122 32531	100pF 5% 50V
2209	5322 122 31863	330pF 5% 63V
2210	5322 122 32531	100pF 5% 50V
2212	4822 124 40248	10µF 20% 63V
2213	4822 126 14305	100nF 10% 16V 0603
2215	5322 122 31863	330pF 5% 63V
2216	5322 122 31863	330pF 5% 63V
2217	5322 122 32531	100pF 5% 50V
2219	5322 122 31863	330pF 5% 63V
2220	5322 122 32531	100pF 5% 50V
2221	4822 126 14076	220nF 80-20% 25V
2222	4822 124 81286	47µF 20% 16V
2224	5322 122 32531	100pF 5% 50V
2226	5322 122 32531	100pF 5% 50V
2228	5322 122 31863	330pF 5% 63V
2229	5322 122 31863	330pF 5% 63V
2235	4822 122 33891	3.3nF 10% 63V
2240	5322 122 32531	100pF 5% 50V
2241	5322 122 32531	100pF 5% 50V
2242	5322 124 41979	10µF 10% 16V
2243	4822 126 14076	220nF 80-20% 25V
2244	4822 126 14076	220nF 80-20% 25V
2245	4822 126 14076	220nF 80-20% 25V
2246	4822 126 14076	220nF 80-20% 25V
2247	4822 126 14076	220nF 80-20% 25V
2248	4822 126 14076	220nF 80-20% 25V
2249	4822 126 14076	220nF 80-20% 25V
2250	4822 126 14076	220nF 80-20% 25V
2251	4822 124 41842	47µF
2258	4822 126 14076	220nF 80-20% 25V
2260	5322 122 31647	1nF 10% 63V
2300	4822 124 40196	220µF 20% 16V
2301	4822 126 13838	100nF 50V 20%
2302	4822 126 13838	100nF 50V 20%
2303	4822 124 22652	2.2µF 20% 50V
2304	4822 126 14305	100nF 10% 16V 0603
2307	4822 122 33741	10pF 10% 50V
2308	4822 122 33741	10pF 10% 50V
2311	4822 124 40196	220µF 20% 16V
2312	4822 126 14305	100nF 10% 16V 0603
2313	4822 126 13694	68pF 1% 63V
2315	5322 122 34098	10nF 10% 63V
2321	4822 126 13881	470pF 5% 50V
2322	4822 126 13881	470pF 5% 50V
2323	5322 121 42386	100nF 5% 63V
2331	5322 126 11583	10nF 10% 50V 0603
2340	4822 126 13881	470pF 5% 50V
2343	5322 122 32448	10pF 5% 63V
2344	4822 126 14305	100nF 10% 16V 0603
2351	4822 126 13849	220nF 10% 16V
2403	4822 126 13838	100nF 50V 20%
2404	4822 126 13838	100nF 50V 20%
2405	4822 126 13838	100nF 50V 20%
2406	4822 126 14305	100nF 10% 16V 0603
2407	4822 126 14305	100nF 10% 16V 0603
2408	4822 126 14305	100nF 10% 16V 0603
2410	4822 126 14305	100nF 10% 16V 0603
2411	4822 126 14305	100nF 10% 16V 0603
2412	4822 126 14305	100nF 10% 16V 0603
2414	3198 021 90030	0Ω jumper 0603
2415	3198 021 90030	0Ω jumper 0603
2416	3198 021 90030	0Ω jumper 0603
2417	4822 126 14305	100nF 10% 16V 0603
2418	4822 124 40769	4.7µF 20% 100V
2419	5322 122 32654	22nF 10% 63V
2422	4822 124 22652	2.2µF 20% 50V
2423	4822 124 21913	1µF 20% 63V
2425	4822 122 33761	22pF 5% 50V
2428	4822 126 13956	68pF 5% 63V 0603
2429	4822 126 13956	68pF 5% 63V 0603
2430	5322 122 32269	6.8pF 5% 50V
2436	4822 124 41842	47µF
2501	4822 126 14305	100nF 10% 16V 0603
2502	4822 126 14305	100nF 10% 16V 0603
2503	4822 126 14305	100nF 10% 16V 0603
2504	4822 126 14305	100nF 10% 16V 0603
2505	4822 126 14305	100nF 10% 16V 0603
2506	4822 126 14305	100nF 10% 16V 0603
2507	4822 126 14305	100nF 10% 16V 0603
2508	4822 126 14305	100nF 10% 16V 0603
2509	4822 126 14305	100nF 10% 16V 0603
2510	4822 126 14305	100nF 10% 16V 0603
2511	4822 126 14305	100nF 10% 16V 0603
2512	4822 126 14305	100nF 10% 16V 0603
2520	4822 126 14305	100nF 10% 16V 0603
2521	4822 126 14305	100nF 10% 16V 0603
2522	5322 126 11579	3.3nF 10% 63V
2525	4822 126 14507	18pF 5% 50V 0603
2528	4822 122 33752	15pF 5% 50V
2532	4822 126 14043	1µF 20% 16V CASE
2534	5322 126 10223	4.7nF 10% 63V
2535	4822 126 14491	2.2µF 10V
2536	4822 126 14585	100nF 10% 50V
2537	4822 126 14585	100nF 10% 50V
2538	4822 124 40433	47µF 20% 25V
2539	4822 126 14305	100nF 10% 16V 0603
2540	4822 124 40433	47µF 20% 25V
2541	5322 122 32654	22nF 10% 63V
2545	4822 126 14305	100nF 10% 16V 0603
2550	4822 126 14305	100nF 10% 16V 0603
2551	5322 122 32448	10pF 5% 63V
2552	5322 122 32269	6.8pF 5% 50V
2553	4822 126 13838	100nF 50V 20%
2554	4822 126 13838	100nF 50V 20%
2555	4822 126 14305	100nF 10% 16V 0603
2556	4822 126 14305	100nF 10% 16V 0603
2557	4822 126 14305	100nF 10% 16V 0603
2558	4822 126 14305	100nF 10% 16V 0603
2559	4822 124 40207	100µF 20% 25V
2560	4822 126 14305	100nF 10% 16V 0603
2561	4822 124 81286	47µF 20% 16V
2562	4822 126 14305	100nF 10% 16V 0603
2563	4822 124 81286	47µF 20% 16V
2567	5322 126 10184	820P 5% 50V
2568	4822 122 31765	100pF 2% 63V
2569	4822 122 33177	10nF 20% 50V
2751	4822 122 33761	22pF 5% 50V
2752	4822 126 13692	47pF 1% 63V
2753	4822 122 32927	220nF 20% 50V
2754	5322 122 32268	470pF 10% 50V
2755	5322 122 32268	470pF 10% 50V
2756	5322 122 32268	470pF 10% 50V
2757	5322 122 32268	470pF 10% 50V
2758	5322 122 32268	470pF 10% 50V
2759	5322 122 32268	470pF 10% 50V
2760	5322 122 32268	470pF 10% 50V
2761	4822 122 32927	220nF 20% 50V
2762	4822 122 32927	220nF 20% 50V
2763	5322 122 32268	470pF 10% 50V
2764	5322 122 32268	470pF 10% 50V
2765	4822 124 12095	100µF 20% 16V
2766	4822 124 12095	100µF 20% 16V
2767	5322 122 32286	3.3pF 5% 50V
2768	5322 122 32286	3.3pF 5% 50V
2769	4822 126 13482	470nF 80/20% 16V
2770	5322 126 11583	10nF 10% 50V 0603
2771	4822 122 33177	10nF 20% 50V
2772	4822 122 33761	22pF 5% 50V
2773	5322 122 31647	1nF 10% 63V
2774	5322 122 31647	1nF 10% 63V
2775	4822 126 13482	470nF 80/20% 16V
2776	4822 122 33761	22pF 5% 50V
2777	5322 124 41979	10µF 10% 16V
2778	5322 124 41979	10µF 10% 16V
2779	4822 126 13838	100nF 50V 20%
2780	5322 124 41979	10µF 10% 16V
2781	4822 126 13838	100nF 50V 20%
2782	5322 124 41979	10µF 10% 16V
2783	4822 126 13482	470nF 80/20% 16V
2784	4822 126 13482	470nF 80/20% 16V
2785	5322 122 31647	1nF 10% 63V
2786	5322 122 31647	1nF 10% 63V
2790	4822 122 33761	22pF 5% 50V
2791	4822 122 33761	22pF 5% 50V
2792	5322 126 11583	10nF 10% 50V 0603
2793	4822 122 33177	10nF 20% 50V
2797	4822 122 33177	10nF 20% 50V
2798	4822 122 33177	10nF 20% 50V
2799	5322 122 32658	22pF 5% 50V
2800	5322 122 32658	22pF 5% 50V
2801	4822 122 33761	22pF 5% 50V
2802	4822 122 32927	220nF 20% 50V
2803	4822 122 32927	220nF 20% 50V
2804	4822 122 32927	220nF 20% 50V
2805	4822 122 32927	220nF 20% 50V
2806	4822 122 32927	220nF 20% 50V
2807	4822 122 32927	220nF 20% 50V
2808	4822 124 12095	100µF 20% 16V
2809	5322 126 10511	1nF 5% 50V
2810	4822 122 33127	2.2nF 10% 63V
2811	5322 126 10511	1nF 5% 50V
2813	5322 126 11583	10nF 10% 50V 0603
2814	5322 126 11583	10nF 10% 50V 0603
2815	5322 126 11583	10nF 10% 50V 0603
2816	4822 124 12095	100µF 20% 16V
2817	5322 126 11583	10nF 10% 50V 0603
2818	4822 124 12095	100µF 20% 16V
2819	4822 124 12095	100µF 20% 16V
2820	5322 126 11578	1nF 10% 50V 0603
2821	4822 122 33177	10nF 20% 50V
2822	5322 126 11578	1nF 10% 50V 0603
2824	4822 124 12095	100µF 20% 16V
2825	4822 122 33177	10nF 20% 50V
2826	4822 122 33761	22pF 5% 50V
2827	5322 126 11578	1nF 10% 50V 0603
2828	4822 122 33177	10nF 20% 50V
2829	5322 126 11578	1nF 10% 50V 0603
2830	4822 122 33177	10nF 20% 50V
2831	4822 124 12095	100µF 20% 16V
2832	4822 126 14494	22nF 10% 25V 0603
2833	4822 126 14494	22nF 10% 25V 0603
2836	4822 126 13692	47pF 1% 63V
2837	5322 126 11583	10nF 10% 50V 0603
2838	4822 122 33761	22pF 5% 50V
2839	5322 126 11583	10nF 10% 50V 0603
2840	5322 126 11583	10nF 10% 50V 0603
2841	4822 126 13482	470nF 80/20% 16V
2842	5322 124 41979	10µF 10% 16V
2843	4822 126 14491	2.2µF 10V
2844	4822 126 14043	1µF 20% 16V
2845	4822 126 14043	1µF 20% 16V
2846	5322 124 41979	10µF 10% 16V
2847	5322 124 41979	10µF 10% 16V
2848	5322 124 41979	10µF 10% 16V
2849	5322 124 41979	10µF 10% 16V
2852	4822 122 32927	220nF 20% 50V
2853	4822 122 32927	220nF 20% 50V
2854	4822 122 32927	220nF 20% 50V
2855	4822 122 32927	220nF 20% 50V
2856	4822 122 32927	220nF 20% 50V
2857	4822 122 32927	220nF 20% 50V
2858	4822 122 32927	220nF 20% 50V
2859	4822 122 32927	220nF 20% 50V
2860	4822 122 32927	220nF 20% 50V
2861	4822 122 32927	220nF 20% 50V
2864	4822 124 81151	22µF 50V
2870	4822 122 32927	220nF 20% 50V
2871	4822 122 32927	220nF 20% 50V
2872	4822 124 40207	100µF 20% 25V
2873	5322 126 10511	1nF 5% 50V
2887	4822 122 32927	220nF 20% 50V
2888	4822 122 32927	220nF 20% 50V
2890	4822 126 14076	220nF 80-20% 25V
2891	4822 126 13838	100nF 50V 20%
2892	4822 126 13482	470nF 80/20% 16V
2895	4822 122 33177	10nF 20% 50V

3001	4822 051 30621	620Ω 5% 0.062W
3003	4822 117 13521	470Ω 5% RESN 0.63W
3004	4822 117 13521	470Ω 5% RESN 0.63W
3005	4822 117 13521	470Ω 5% RESN 0.63W
3006	4822 051 30103	10k 5% 0.062W
3007	4822 051 30103	10k 5% 0.062W
3009	4822 117 13521	470Ω 5% RESN 0.63W
3010	4822 051 30103	10k 5% 0.062W
3011	4822 051 30472	4k7 5% 0.062W
3013	4822 051 30102	1k 5% 0.062W
3014	4822 117 12925	47k 1% 0.063W 0603
3015	4822 117 12925	47k 1% 0.063W 0603

3016	4822 051 30102	1k 5% 0.062W
3017	4822 051 30102	1k 5% 0.062W
3018	4822 051 30221	220Ω 5% 0.062W
3019	4822 051 30681	680Ω 5% 0.062W
3020	4822 051 30221	220Ω 5% 0.062W
3021	4822 051 30221	220Ω 5% 0.062W
3022	4822 051 10102	1k 2% 0.25W
3023	4822 117 13521	470Ω 5% RESN 0.63W
3024	4822 051 30471	470Ω 5% 0.062W
3027	4822 117 13521	470Ω 5% RESN 0.63W
3028	4822 117 13521	470Ω 5% RESN 0.63W
3029	4822 051 30471	470Ω 5% 0.062W
3030	4822 117 13522	100Ω 5% RESN 0.63W
3031	4822 117 13577	330Ω 1% 1.25W
3032	4822 051 30471	470Ω 5% 0.062W
3033	4822 117 13523	220Ω 5% RESN 0.63W
3034	4822 051 30103	10k 5% 0.062W
3035	4822 051 30103	10k 5% 0.062W
3036	4822 117 13524	2.2k 5% RESN 0.63W
3039	4822 051 30333	33k 5% 0.062W
3041	4822 117 10833	10k 1% 0.1W
3042	4822 051 20474	470k 5% 0.1W
3043	4822 051 30472	4k7 5% 0.062W
3047	4822 117 13525	24k 1% 0.62W 0603
3048	4822 117 13526	150Ω 5% RESN 0.63W
3059	4822 051 30681	680Ω 5% 0.062W
3062	4822 117 12925	47k 1% 0.063W 0603
3063	4822 051 30472	4k7 5% 0.062W
3066	4822 117 10833	10k 1% 0.1W
3067	4822 051 30472	4k7 5% 0.062W
3068	4822 051 30103	10k 5% 0.062W
3069	4822 051 30689	68Ω 5% 0.063W 0603
3070	4822 051 30103	10k 5% 0.062W
3071	4822 051 30472	4k7 5% 0.062W
3072	4822 117 10834	47k 1% 0.1W
3073	4822 051 20472	4k7 5% 0.1W
3075	4822 051 30472	4k7 5% 0.062W
3076	4822 051 30472	4k7 5% 0.062W
3080	4822 117 13522	100Ω 5% RESN 0.63W
3081	4822 051 30101	100Ω 5% 0.062W
3102	4822 117 10833	10k 1% 0.1W
3103	4822 051 20101	100Ω 5% 0.1W
3104	4822 051 20101	100Ω 5% 0.1W
3106	4822 051 20479	47Ω 5% 0.1W
3110	4822 117 11449	2k2 1% 0.1W
3111	4822 117 11449	2k2 1% 0.1W
3112	4822 051 20472	4k7 5% 0.1W
3114	4822 051 20472	4k7 5% 0.1W
3118	4822 051 20391	390Ω 5% 0.1W
3119	4822 051 20479	47Ω 5% 0.1W
3124	4822 051 30101	100Ω 5% 0.062W
3133	4822 117 12955	2k7 1% 0.1W 0805
3135	4822 051 20472	4k7 5% 0.1W
3136	4822 117 11503	220Ω 1% 0.1W
3137	4822 051 10102	1k 2% 0.25W
3138	4822 117 11504	270Ω 1% 0.1W
3139	4822 117 11139	1k5 1% 0.1W
3140	4822 116 83933	15k 1% 0.1W
3141	4822 051 30333	33k 5% 0.062W
3142	4822 051 30102	1k 5% 0.062W
3143	4822 051 30102	1k 5% 0.062W
3145	4822 051 30101	100Ω 5% 0.062W
3146	4822 051 20223	22k 5% 0.1W
3147▲	4822 052 10109	10Ω 5% 0.33W
3150▲	4822 052 10189	18Ω 5% 0.33W
3151▲	4822 052 10159	15Ω 5% 0.33W
3200	4822 117 10353	150Ω 1% 0.1W
3201	4822 117 10353	150Ω 1% 0.1W
3202	4822 117 10353	150Ω 1% 0.1W
3203	4822 117 10353	150Ω 1% 0.1W
3204▲	4822 052 10688	6Ω8 5% 0.33W
3205	4822 051 20471	470Ω 5% 0.1W
3206	4822 117 12521	68Ω 1% 0.1W
3207	4822 051 20561	560Ω 5% 0.1W
3208	4822 051 20399	39Ω 5% 0.1W
3209	4822 117 11927	75Ω 1% 0.1W
3210	4822 117 11927	75Ω 1% 0.1W
3211	4822 117 11927	75Ω 1% 0.1W
3212	4822 051 20399	39Ω 5% 0.1W
3213	4822 117 11927	75Ω 1% 0.1W
3215	4822 117 11927	75Ω 1% 0.1W
3216	4822 051 20822	8k2 5% 0.1W
3218	4822 051 20392	3k9 5% 0.1W
3219	4822 051 10102	1k 2% 0.25W
3220	4822 051 10102	1k 2% 0.25W
3221	4822 117 10353	150Ω 1% 0.1W
3222	4822 117 10353	150Ω 1% 0.1W
3223	4822 117 10353	150Ω 1% 0.1W
3224	4822 117 10353	150Ω 1% 0.1W
3225▲	4822 052 10688	6Ω8 5% 0.33W
3227	4822 051 20399	39Ω 5% 0.1W
3228	4822 051 30101	100Ω 5% 0.062W
3229	4822 051 30103	10k 5% 0.062W
3230	4822 051 20561	560Ω 5% 0.1W
3231	4822 051 20399	39Ω 5% 0.1W
3232	4822 117 12521	68Ω 1% 0.1W
3233	4822 117 10353	150Ω 1% 0.1W
3235	4822 117 10353	150Ω 1% 0.1W
3236	4822 117 11927	75Ω 1% 0.1W
3237	4822 051 20399	39Ω 5% 0.1W
3238	4822 051 30759	75Ω 5% 0.062W
3240	4822 117 11927	75Ω 1% 0.1W
3241	4822 117 10353	150Ω 1% 0.1W
3242	4822 051 20822	8k2 5% 0.1W
3243	4822 117 10353	150Ω 1% 0.1W
3244	4822 051 10102	1k 2% 0.25W
3245	4822 051 20392	3k9 5% 0.1W
3246	4822 051 10102	1k 2% 0.25W
3248	4822 117 13577	330Ω 1% 1.25W
3249	4822 117 12955	2k7 1% 0.1W 0805
3250	4822 117 11139	1k5 1% 0.1W
3252	4822 051 20339	33Ω 5% 0.1W
3253	4822 051 20391	390Ω 5% 0.1W
3254	4822 051 10102	1k 2% 0.25W
3255	4822 051 10102	1k 2% 0.25W
3256	4822 117 11927	75Ω 1% 0.1W
3257	4822 117 10353	150Ω 1% 0.1W
3258	4822 117 10353	150Ω 1% 0.1W
3259	4822 051 30273	27k 5% 0.062W
3262	4822 117 12925	47k 1% 0.063W 0603
3263	4822 051 30221	220Ω 5% 0.062W
3264	4822 051 20822	8k2 5% 0.1W
3265	4822 117 12955	2k7 1% 0.1W 0805
3266	4822 117 10833	10k 1% 0.1W
3269	4822 051 30561	560Ω 5% 0.062W
3270	4822 051 10102	1k 2% 0.25W
3271	4822 051 10102	1k 2% 0.25W
3272	4822 117 10353	150Ω 1% 0.1W
3273	4822 051 20822	8k2 5% 0.1W
3274	4822 117 12955	2k7 1% 0.1W 0805
3275	4822 051 30339	33Ω 5% 0.062W
3276	4822 051 30391	390Ω 5% 0.062W
3277	4822 051 30222	2k2 5% 0.062W
3278	4822 051 30331	330Ω 5% 0.062W
3279	4822 051 30151	150Ω 5% 0.062W
3280	4822 117 10353	150Ω 1% 0.1W
3281	4822 117 12903	1k8 1% 0.063W 0603
3282	4822 117 13632	100k 1% 0603 0.62W
3283	4822 051 30683	68k 5% 0.062W
3284	4822 117 13632	100k 1% 0603 0.62W
3285	4822 051 30683	68k 5% 0.062W
3286	4822 117 13632	100k 1% 0603 0.62W
3287	4822 051 30683	68k 5% 0.062W
3288	4822 051 30101	100Ω 5% 0.062W
3289	4822 051 30101	100Ω 5% 0.062W
3290▲	4822 052 10688	6Ω8 5% 0.33W
3291	4822 051 30561	560Ω 5% 0.062W
3292	4822 051 30103	10k 5% 0.062W
3293	4822 051 30471	470Ω 5% 0.062W
3294	4822 051 30103	10k 5% 0.062W
3295	4822 051 30471	470Ω 5% 0.062W
3296	4822 051 30103	10k 5% 0.062W
3297	4822 051 30103	10k 5% 0.062W
3298	4822 117 13632	100k 1% 0603 0.62W
3299	4822 051 30683	68k 5% 0.062W
3300▲	4822 052 10688	6Ω8 5% 0.33W
3302	4822 051 30101	100Ω 5% 0.062W
3303	4822 051 30101	100Ω 5% 0.062W
3304	4822 051 30101	100Ω 5% 0.062W
3307	4822 051 30102	1k 5% 0.062W
3308	4822 051 30102	1k 5% 0.062W
3309	4822 051 30333	33k 5% 0.062W
3310	4822 051 20332	3k3 5% 0.1W
3311	4822 051 30102	1k 5% 0.062W
3312	4822 117 13632	100k 1% 0603 0.62W
3315	4822 051 20182	1k8 5% 0.1W
3316	4822 051 10102	1k 2% 0.25W
3317	4822 051 30102	1k 5% 0.062W
3318	4822 051 30102	1k 5% 0.062W
3320	4822 051 30102	1k 5% 0.062W
3321	4822 051 30102	1k 5% 0.062W
3322	4822 051 30102	1k 5% 0.062W
3323	4822 051 20393	39k 5% 0.1W
3325	4822 051 30102	1k 5% 0.062W
3326	4822 051 30221	220Ω 5% 0.062W
3330	4822 051 30684	680k 5% 0.062W
3331	4822 117 12925	47k 1% 0.063W 0603
3332	4822 051 30183	18k 5% 0.062W
3340	4822 051 30123	12k 5% 0.062W
3341	4822 051 10102	1k 2% 0.25W
3342	4822 051 30103	10k 5% 0.062W
3343	4822 117 10837	100k 1% 0.1W
3344	4822 051 30103	10k 5% 0.062W
3350	4822 051 30474	470k 5% 0.062W
3351	4822 117 12891	220k 1%
3352	4822 051 30332	3k3 5% 0.062W
3353	4822 117 12903	1k8 1% 0.063W 0603
3369	4822 051 30103	10k 5% 0.062W
3370	4822 051 30103	10k 5% 0.062W
3400	4822 117 11454	820Ω 1% 0.1W
3401	4822 117 11454	820Ω 1% 0.1W
3402	4822 117 11454	820Ω 1% 0.1W
3404	4822 051 20479	47Ω 5% 0.1W
3405	4822 051 20479	47Ω 5% 0.1W
3406	4822 051 20479	47Ω 5% 0.1W
3407	4822 117 10361	680Ω 1% 0.1W
3408	4822 117 10361	680Ω 1% 0.1W
3409	4822 117 10361	680Ω 1% 0.1W
3420	4822 117 12925	47k 1% 0.063W 0603
3422	4822 117 11449	2k2 1% 0.1W
3423	4822 117 11449	2k2 1% 0.1W
3425	4822 051 30155	1M5 5% 0.062W
3426	4822 051 30333	33k 5% 0.062W
3427	4822 051 30154	150k 5% 0.062W
3428	4822 051 30222	2k2 5% 0.062W
3429	4822 117 12968	820Ω 5% 0.62W
3430	4822 051 30181	180Ω 5% 0.062W
3431	4822 051 30682	6k8 5% 0.062W
3432	4822 051 30101	100Ω 5% 0.062W
3433	4822 051 30101	100Ω 5% 0.062W
3434▲	4822 052 10478	4Ω7 5% 0.33W
3436	4822 051 20008	0Ω jumper 0805
3438	4822 117 10834	47k 1% 0.1W
3439	4822 117 10833	10k 1% 0.1W
3440	4822 051 20333	33k 5% 0.1W
3441	4822 051 20223	22k 5% 0.1W
3442	4822 051 20333	33k 5% 0.1W
3443	4822 051 20683	68k 5% 0.1W
3521	4822 117 13632	100k 1% 0603 0.62W
3530	4822 051 30101	100Ω 5% 0.062W
3531	4822 051 30101	100Ω 5% 0.062W
3532	4822 116 83933	15k 1% 0.1W
3538▲	4822 052 10478	4Ω7 5% 0.33W
3545	4822 051 30471	470Ω 5% 0.062W
3546	4822 051 30471	470Ω 5% 0.062W
3551	4822 051 30271	270Ω 5% 0.062W
3553	4822 117 10353	150Ω 1% 0.1W
3554	4822 051 10102	1k 2% 0.25W
3556	4822 117 10833	10k 1% 0.1W
3557	4822 051 30479	47Ω 5% 0.062W
3565	3198 021 90030	0Ω jumper 0603
3566	3198 021 90030	0Ω jumper 0603
3567	4822 051 20101	100Ω 5% 0.1W
3568	4822 051 20471	470Ω 5% 0.1W
3569	4822 051 30479	47Ω 5% 0.062W
3570	4822 117 13522	100Ω 5% RESN 0.63W
3583	4822 051 30101	100Ω 5% 0.062W
3584	4822 051 30471	470Ω 5% 0.062W
3585	4822 051 30479	47Ω 5% 0.062W
3750▲	4822 052 10228	2Ω2 5% 0.33W
3751	4822 051 30223	22k 5% 0.062W
3752	4822 051 30223	22k 5% 0.062W
3753	4822 051 30562	5k6 5% 0.063W 0603
3753	4822 051 30682	6k8 5% 0.062W
3754	4822 051 30562	5k6 5% 0.063W 0603
3754	4822 051 30682	6k8 5% 0.062W
3755	4822 051 30101	100Ω 5% 0.062W
3756	4822 051 30101	100Ω 5% 0.062W
3758	4822 117 12925	47k 1% 0.063W 0603
3760	4822 117 12925	47k 1% 0.063W 0603
3761	4822 051 30682	6k8 5% 0.062W
3762	4822 051 20472	4k7 5% 0.1W
3765	4822 051 30683	68k 5% 0.062W
3766	4822 051 30103	10k 5% 0.062W
3767	4822 051 30683	68k 5% 0.062W
3768	4822 051 30103	10k 5% 0.062W
3769	4822 117 11507	6k8 1% 0.1W
3770	4822 117 11507	6k8 1% 0.1W
3771	4822 116 83933	15k 1% 0.1W
3772	4822 116 83933	15k 1% 0.1W
3773	4822 051 20472	4k7 5% 0.1W
3776	4822 051 20333	33k 5% 0.1W
3777	4822 117 11148	56k 1% 0.1W
3778	4822 051 20333	33k 5% 0.1W
3779	4822 117 11148	56k 1% 0.1W
3780	4822 051 30682	6k8 5% 0.062W
3781	4822 051 30561	560Ω 5% 0.062W
3782	4822 051 30101	100Ω 5% 0.062W
3783	4822 051 20101	100Ω 5% 0.1W
3784	3198 021 90030	0Ω jumper 0603
3784	4822 051 30682	6k8 5% 0.062W
3785	3198 021 90030	0Ω jumper 0603
3785	4822 051 30682	6k8 5% 0.062W

3786	4822 051 30223	22k 5% 0.062W
3787	4822 051 30223	22k 5% 0.062W
3788	4822 051 30682	6k8 5% 0.062W
3789	4822 051 30682	6k8 5% 0.062W
3790	4822 051 30223	22k 5% 0.062W
3791	4822 051 30223	22k 5% 0.062W
3792	4822 051 30682	6k8 5% 0.062W
3793	4822 051 30682	6k8 5% 0.062W
3794	4822 051 30223	22k 5% 0.062W
3795	4822 051 30223	22k 5% 0.062W
3796	4822 051 20121	120Ω 5% 0.1W
3797	4822 051 20121	120Ω 5% 0.1W
3798	4822 117 10834	47k 1% 0.1W
3799	4822 117 12925	47k 1% 0.063W 0603
3811	4822 051 30101	100Ω 5% 0.062W
3812	4822 051 30101	100Ω 5% 0.062W
3813	4822 051 30101	100Ω 5% 0.062W
3814	4822 051 30101	100Ω 5% 0.062W
3817	4822 117 10837	100k 1% 0.1W
3818	4822 051 30101	100Ω 5% 0.062W
3819	4822 051 30101	100Ω 5% 0.062W
3820	4822 051 30101	100Ω 5% 0.062W
3821	4822 051 30332	3k3 5% 0.062W
3822	4822 051 30333	33k 5% 0.062W
3823	4822 051 20472	4k7 5% 0.1W
3824	4822 051 20101	100Ω 5% 0.1W
3825	4822 051 30563	56k 5% 0.062W
3826	4822 117 10353	150Ω 1% 0.1W
3827	4822 051 30101	100Ω 5% 0.062W
3828	4822 117 12925	47k 1% 0.063W 0603
3829	4822 117 12925	47k 1% 0.063W 0603
3830	4822 051 20121	120Ω 5% 0.1W
3831	4822 051 20121	120Ω 5% 0.1W
3832	4822 051 10102	1k 2% 0.25W
3833	4822 051 30103	10k 5% 0.062W
3837	4822 051 30563	56k 5% 0.062W
3838	4822 051 30101	100Ω 5% 0.062W
3839	4822 051 30101	100Ω 5% 0.062W
3840	4822 051 30103	10k 5% 0.062W
3841	4822 051 30101	100Ω 5% 0.062W
3842	4822 117 12925	47k 1% 0.063W 0603
3844	4822 117 12925	47k 1% 0.063W 0603
3845	4822 117 12925	47k 1% 0.063W 0603
3846	4822 117 12925	47k 1% 0.063W 0603
3847	4822 117 12925	47k 1% 0.063W 0603
3848	4822 051 30101	100Ω 5% 0.062W
3849	4822 051 30101	100Ω 5% 0.062W
3850	4822 051 20332	3k3 5% 0.1W
3851	4822 051 20332	3k3 5% 0.1W
3852	4822 051 30223	22k 5% 0.062W
3853	4822 051 30223	22k 5% 0.062W
3854	4822 117 10833	10k 1% 0.1W
3855	4822 117 10833	10k 1% 0.1W
3856	4822 117 10833	10k 1% 0.1W
3857	4822 117 10833	10k 1% 0.1W
3858	4822 117 10833	10k 1% 0.1W
3859	4822 117 10833	10k 1% 0.1W
3860	4822 117 10833	10k 1% 0.1W
3861	4822 117 10833	10k 1% 0.1W
3862	4822 117 11507	6k8 1% 0.1W
3864	4822 051 20223	22k 5% 0.1W
3866	4822 051 20101	100Ω 5% 0.1W
3867	4822 051 20101	100Ω 5% 0.1W
3877	4822 051 20332	3k3 5% 0.1W
3878	4822 051 20332	3k3 5% 0.1W
3879	4822 051 20332	3k3 5% 0.1W
3880	4822 051 20332	3k3 5% 0.1W
3881	4822 051 20332	3k3 5% 0.1W
3882	4822 051 20332	3k3 5% 0.1W
3883	4822 051 20822	8k2 5% 0.1W
3884	4822 117 11507	6k8 1% 0.1W
3885	4822 117 11148	56k 1% 0.1W
3886	4822 051 20393	39k 5% 0.1W
3887	4822 051 20101	100Ω 5% 0.1W
3888	4822 051 20562	5k6 5% 0.1W 0805
3890	4822 051 30272	2k7 5% 0.062W
3890	3198 021 90030	0Ω jumper 0603
3891	4822 051 30102	1k 5% 0.062W
3892	4822 117 12955	2k7 1% 0.1W 0805
3893	4822 051 10102	1k 2% 0.25W
3894	4822 117 10834	47k 1% 0.1W
3895	4822 051 30103	10k 5% 0.062W
3897	4822 051 30472	4k7 5% 0.062W
3898	4822 051 30101	100Ω 5% 0.062W
4xxx	4822 051 10008	0Ω jumper 1206
4xxx	4822 051 20008	0Ω jumper 0805
4xxx	3198 021 90030	0Ω jumper 0603

5001	4822 157 11828	22U 20% 0805
5002	4822 157 11775	6.8µH 5%
5101	4822 157 11775	6.8µH 5%
5102	4822 157 71303	0.39µH 10%
5103	4822 157 11776	Coil var. 40.4MHz
5106	4822 157 10977	4.7µH 10%
5108	4822 157 11534	Coil var. 78MHz
5301	4822 157 11876	6.8µH 10% 0805
5302	4822 157 11876	6.8µH 10% 0805
5305	4822 157 11778	5.6µH 10% 0805
5306	4822 157 11778	5.6µH 10% 0805
5307	4822 157 11778	5.6µH 10% 0805
5501	4822 157 11775	6.8µH 5%
5502	4822 157 11775	6.8µH 5%
5540	4822 157 71304	1µH 10%
5553	4822 157 11855	68µH 10% 0805
5559	4822 157 11775	6.8µH 5%
5560	4822 157 11775	6.8µH 5%
5562	4822 157 11775	6.8µH 5%
5751	4822 157 11775	6.8µH 5%
5752	4822 157 11775	6.8µH 5%
5753	4822 157 11775	6.8µH 5%
5754	4822 157 11876	6.8µH 10% 0805
5755	4822 157 11876	6.8µH 10% 0805
5756	4822 157 11775	6.8µH 5%
5757	4822 157 11876	6.8µH 10% 0805

6001	4822 130 11422	PLVA2650A
6002	4822 130 11422	PLVA2650A
6003	4822 130 11422	PLVA2650A
6004	4822 130 11422	PLVA2650A
6006	4822 130 11422	PLVA2650A
6008	4822 130 11422	PLVA2650A
6009	4822 130 11422	PLVA2650A
6012	4822 130 11422	PLVA2650A
6013	4822 130 11422	PLVA2650A
6017	4822 130 11422	PLVA2650A
6019	4822 130 11422	PLVA2650A
6021	4822 130 11422	PLVA2650A
6023	4822 130 11422	PLVA2650A
6025	4822 130 11423	PLVA2656A
6026	4822 130 11423	PLVA2656A
6037	4822 130 11366	BZX284-C3V9
6101	4822 130 11027	BZX284-C33
6103	4822 130 10414	BA792
6104	4822 130 10414	BA792
6106	4822 130 83757	BAS216
6107	4822 130 83757	BAS216
6200	4822 130 11413	PDZ10B
6201	4822 130 11416	PDZ6.8B
6202	4822 130 11413	PDZ10B
6203	4822 130 11413	PDZ10B
6204	4822 130 11416	PDZ6.8B
6205	4822 130 11413	PDZ10B
6206	4822 130 11413	PDZ10B
6207	4822 130 11416	PDZ6.8B
6208	4822 130 11413	PDZ10B
6209	4822 130 11413	PDZ10B
6210	4822 130 11416	PDZ6.8B
6211	4822 130 11416	PDZ6.8B
6212	4822 130 11416	PDZ6.8B
6213	4822 130 11416	PDZ6.8B
6214	4822 130 11413	PDZ10B
6215	4822 130 11413	PDZ10B
6216	4822 130 11413	PDZ10B
6217	4822 130 11413	PDZ10B
6218	4822 130 11031	BZX284-C12
6219	4822 130 11416	PDZ6.8B
6220	4822 130 11413	PDZ10B
6221	4822 130 11413	PDZ10B
6222	4822 130 11416	PDZ6.8B
6223	4822 130 11413	PDZ10B
6224	4822 130 11413	PDZ10B
6225	4822 130 11416	PDZ6.8B
6226	4822 130 11416	PDZ6.8B
6227	4822 130 11416	PDZ6.8B
6228	4822 130 11416	PDZ6.8B
6229	4822 130 11413	PDZ10B
6230	4822 130 11413	PDZ10B
6231	4822 130 11413	PDZ10B
6232	4822 130 10794	BZX284-C10
6233	4822 130 11416	PDZ6.8B
6234	4822 130 10794	BZX284-C10
6235	4822 130 10794	BZX284-C10
6236	4822 130 10794	BZX284-C10
6237	4822 130 10794	BZX284-C10
6238	4822 130 10654	BAT254
6240	4822 130 11413	PDZ10B
6241	4822 130 11413	PDZ10B
6242	4822 130 11413	PDZ10B
6243	4822 130 11413	PDZ10B
6244	4822 130 11416	PDZ6.8B
6250	4822 130 10654	BAT254
6260	4822 130 10794	BZX284-C10
6261	4822 130 10794	BZX284-C10
6340	4822 130 83757	BAS216
6341	4822 130 11594	BZX284-C47
6344	4822 130 83757	BAS216
6350	4822 130 11414	BZX284-C27
6420	4822 130 83206	MTZ5.6B2
6422	4822 130 83757	BAS216
6424	4822 130 83757	BAS216
6429	4822 130 83206	MTZ5.6B2
6430	4822 130 83757	BAS216
6431	4822 130 83757	BAS216
6432	4822 130 83757	BAS216
6751	4822 130 11413	PDZ10B
6752	4822 130 11413	PDZ10B
6753	4822 130 11413	PDZ10B
6754	4822 130 11413	PDZ10B
6755	4822 130 11413	PDZ10B
6756	4822 130 11413	PDZ10B
6757	4822 130 83757	BAS216

7002	3104 317 01981	Software MG31E11.0_01981
7003	9352 629 88557	SAA5801/011 V30
7004	4822 130 60511	BC847B
7005	4822 130 60373	BC856B
7006	4822 130 60373	BC856B
7007	4822 130 60511	BC847B
7008	4822 209 16977	M24C32-WBN6
7009	4822 209 16978	LF33CV
7010	4822 209 73852	PMBT2369
7011	4822 130 11155	PDTC114ET
7012	4822 130 60373	BC856B
7013	4822 209 17308	M29W400T-100M1
7014	4822 130 60511	BC847B
7015	4822 130 60373	BC856B
7016	4822 130 60511	BC847B
7103	4822 130 60511	BC847B
7104	4822 130 60511	BC847B
7107	4822 130 60373	BC856B
7111	4822 130 60511	BC847B
7200	4822 130 40959	BC547B
7201	4822 130 40959	BC547B
7203	4822 130 44568	BC557B
7204	4822 130 60511	BC847B
7205	4822 130 60511	BC847B
7206	4822 130 60511	BC847B
7207	4822 130 60373	BC856B
7208	4822 209 12999	TEA6415C
7216	4822 130 60511	BC847B
7300	4822 209 16979	TDA9330H/N1
7341	4822 130 60373	BC856B
7351	4822 130 60373	BC856B
7402	4822 209 17311	TDA9178T/N1
7418	4822 130 60373	BC856B
7419	4822 130 60373	BC856B
7420	4822 130 60373	BC856B
7424	4822 130 60373	BC856B
7438	4822 130 10255	MMUN2213
7501	4822 209 17487	TDA9320AH/N1
7502	4822 130 60511	BC847B
7555	4822 130 60373	BC856B
7560	4822 209 12998	SAA4961/V3/S1
7561	4822 130 60511	BC847B
7575	4822 130 60511	BC847B
7701	4822 130 60511	BC847B
7750	4822 209 16978	LF33CV
7751	4822 209 16803	MSP3410D-PS-B4
7752	5322 209 11102	HEF4052BT
7753	5322 209 11102	HEF4052BT
7756	4822 209 30095	LM833D
7757	4822 209 31378	NJM4556MB
7758	4822 209 30095	LM833D
7770	4822 209 17421	SAA7712H/N203
7772	4822 209 30095	LM833D
7774	4822 130 60511	BC847B
7775	5322 209 11102	HEF4052BT
7777	4822 209 90369	TEA6422

Feature Box [L]

Various

0025	3104 301 23823	FBX-shield top
0026	3104 301 23834	FBX-shield bottom
0300	2422 486 80737	Socket IC 32P
0361	2422 025 15389	9P male h
0362	2422 025 15389	9P male h
1002	4822 242 10685	Crystal 12MHz
	3104 328 01711	FBX6 falconic no PAL+

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2600	4822 126 14218	3.9pF 50V
2601	4822 126 11669	27pF
2602	4822 126 11663	12pF
2603	4822 126 14218	3.9pF 50V
2604	4822 126 11669	27pF
2605	4822 126 11663	12pF
2606	4822 126 14218	3.9pF 50V
2607	4822 126 11669	27pF
2608	4822 126 11663	12pF
2610	4822 126 14225	56pF 5% 50V 0603
2611	4822 124 40769	4.7µF 20% 100V
2612	4822 126 14585	100nF 10% 50V
2613	4822 126 14225	56pF 5% 50V 0603
2614	4822 124 40255	100µF 20% 63V
2615	4822 126 14585	100nF 10% 50V
2616	4822 126 14585	100nF 10% 50V
2617	4822 124 80791	470µF 20% 16V
2618	4822 126 14585	100nF 10% 50V
2619	4822 126 14585	100nF 10% 50V
2620	5322 122 32654	22nF 10% 63V
2621	4822 122 33752	15pF 5% 50V
2622	4822 122 33777	47pF 5% 63V
2623	4822 122 33753	150pF 5% 50V
2624	4822 126 14494	22nF 10% 25V 0603
2625	4822 126 14585	100nF 10% 50V
2626	4822 122 33752	15pF 5% 50V
2627	4822 122 33777	47pF 5% 63V
2628	4822 122 33753	150pF 5% 50V
2629	4822 126 14494	22nF 10% 25V 0603
2630	4822 122 33752	15pF 5% 50V
2631	4822 122 33777	47pF 5% 63V
2632	4822 122 33753	150pF 5% 50V
2633	4822 122 31765	100pF 2% 63V
2634	4822 122 31765	100pF 2% 63V
2635	4822 122 33761	22pF 5% 50V
2636	4822 122 33761	22pF 5% 50V
2637	4822 124 40769	4.7µF 20% 100V
2638	4822 126 14585	100nF 10% 50V
2639	4822 126 14507	18pF 5% 50V 0603
2640	4822 126 14507	18pF 5% 50V 0603
2648	4822 126 14043	1µF 20% 16V
2651	4822 126 14585	100nF 10% 50V
2652	4822 126 14305	100nF 10% 16V 0603
2654	4822 126 14305	100nF 10% 16V 0603
2656	4822 126 14305	100nF 10% 16V 0603
2659	4822 126 14494	22nF 10% 25V 0603
2662	4822 124 40255	100µF 20% 63V
2663	4822 124 40255	100µF 20% 63V
2664	4822 126 14507	18pF 5% 50V 0603
2665	4822 126 14507	18pF 5% 50V 0603
2666	4822 126 14507	18pF 5% 50V 0603
2670	4822 124 40248	10µF 20% 63V
2671	4822 124 40248	10µF 20% 63V
2672	4822 126 14305	100nF 10% 16V 0603
2673	4822 126 14585	100nF 10% 50V
2677	4822 126 14585	100nF 10% 50V
2680	5322 122 32311	470pF 10% 100V
2681	4822 126 14585	100nF 10% 50V
2682	4822 126 14305	100nF 10% 16V 0603
2683	4822 126 14585	100nF 10% 50V
2684	4822 126 14305	100nF 10% 16V 0603
2685	4822 124 40248	10µF 20% 63V
2686	4822 126 14305	100nF 10% 16V 0603
2687	4822 126 13691	27pF 1% 63V
2690	4822 126 14305	100nF 10% 16V 0603

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3600	4822 051 30391	390Ω 5% 0.062W
3601	4822 117 12968	820Ω 5% 0.62W
3602	4822 051 30391	390Ω 5% 0.062W
3603	4822 051 30392	3k9 5% 0.063W 0603
3604	4822 117 13632	100k 1% 0603 0.62W
3605	4822 051 30272	2k7 5% 0.062W
3607	4822 051 30391	390Ω 5% 0.062W
3608	4822 117 12917	1Ω 5% 0.062W 0603
3609	4822 051 30102	1k 5% 0.062W
3610	4822 051 30471	470Ω 5% 0.062W
3613	4822 051 30472	4k7 5% 0.062W
3614	4822 051 30472	4k7 5% 0.062W
3615	4822 051 30109	10Ω 5% 0.062W
3616	4822 051 30102	1k 5% 0.062W
3617	4822 051 30472	4k7 5% 0.062W
3619	4822 051 30472	4k7 5% 0.062W
3620▲	4822 052 10109	10Ω 5% 0.33W
3621	4822 051 30681	680Ω 5% 0.062W
3622	4822 051 30221	220Ω 5% 0.062W
3623	4822 117 13632	100k 1% 0603 0.62W
3624	4822 051 30681	680Ω 5% 0.062W
3625	4822 051 30221	220Ω 5% 0.062W
3626	4822 117 13632	100k 1% 0603 0.62W
3627	4822 117 11503	220Ω 1% 0.1W
3628	4822 051 30221	220Ω 5% 0.062W
3630	4822 117 13632	100k 1% 0603 0.62W
3631	4822 051 30151	150Ω 5% 0.062W
3632	4822 051 30332	3k3 5% 0.062W
3633	4822 051 30151	150Ω 5% 0.062W
3634	4822 051 30332	3k3 5% 0.062W
3635	4822 051 30101	100Ω 5% 0.062W
3636	4822 051 30101	100Ω 5% 0.062W
3637	4822 051 30221	220Ω 5% 0.062W
3638	4822 051 30221	220Ω 5% 0.062W
3639	4822 051 30221	220Ω 5% 0.062W
3640	4822 051 30105	1M 5% 0.062W
3641	4822 051 20472	4k7 5% 0.1W
3646	4822 051 20101	100Ω 5% 0.1W
3647	4822 051 20101	100Ω 5% 0.1W
3648	4822 051 30103	10k 5% 0.062W
3649	4822 051 30102	1k 5% 0.062W
3654	4822 051 10102	1k 2% 0.25W
3676	4822 117 12139	22Ω 5% 0.062W
3677	4822 051 30101	100Ω 5% 0.062W
3678	4822 051 30681	680Ω 5% 0.062W
3680	4822 051 20108	1Ω 5% 0.1W
3681▲	4822 052 10109	10Ω 5% 0.33W
3683	4822 051 10102	1k 2% 0.25W
3687▲	4822 052 10109	10Ω 5% 0.33W
3688	4822 117 12925	47k 1% 0.063W 0603
3689	4822 117 12925	47k 1% 0.063W 0603
3690	4822 117 12925	47k 1% 0.063W 0603
3691	4822 117 12925	47k 1% 0.063W 0603
3692	4822 117 12925	47k 1% 0.063W 0603
3693	4822 117 12925	47k 1% 0.063W 0603
3694	4822 117 12925	47k 1% 0.063W 0603
3695	4822 117 12925	47k 1% 0.063W 0603
3696	4822 117 12925	47k 1% 0.063W 0603
3697	4822 051 30479	47Ω 5% 0.062W
3698	4822 051 30479	47Ω 5% 0.062W
3699	4822 051 30331	330Ω 5% 0.062W
4xxx	4822 051 10008	0Ω jumper 1206
4xxx	4822 051 20008	0Ω jumper 0805

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5600	4822 157 11778	5.6µH 10% 0805
5601	4822 157 11778	5.6µH 10% 0805
5602	4822 157 11778	5.6µH 10% 0805
5603	4822 157 11781	Bead 100MHz 600Ω
5604	4822 157 11781	Bead 100MHz 600Ω
5605	4822 157 11716	Bead 100MHz 30Ω
5606	4822 157 11716	Bead 100MHz 30Ω
5607	4822 157 11716	Bead 100MHz 30Ω
5608	4822 157 11876	6.8µH 10% 0805
5610	4822 157 11876	6.8µH 10% 0805
5611	4822 157 11716	Bead 100MHz 30Ω
5612	3198 018 38280	8.2µH 10% 0805
5613	4822 157 11876	6.8µH 10% 0805
5615	4822 157 11716	Bead 100MHz 30Ω
5631	4822 157 11716	Bead 100MHz 30Ω
5632	4822 157 11716	Bead 100MHz 30Ω
5633	4822 157 11716	Bead 100MHz 30Ω
5635	4822 157 11716	Bead 100MHz 30Ω
5638	4822 157 11716	Bead 100MHz 30Ω
5639	4822 157 11716	Bead 100MHz 30Ω
5640	4822 157 11716	Bead 100MHz 30Ω
5641	4822 157 11716	Bead 100MHz 30Ω
5642	4822 157 11716	Bead 100MHz 30Ω

7600	4822 130 60373	BC856B
7601	4822 130 60511	BC847B
7602	4822 209 17307	MSM54V12222A-30JS
7604	4822 209 73852	PMBT2369
7605	4822 209 73852	PMBT2369
7607	4822 130 60373	BC856B
7608	4822 130 60373	BC856B
7610	4822 130 60373	BC856B
7611	9352 626 35557	SAA4978H/V2
7612	4822 130 60511	BC847B
7613	4822 130 60511	BC847B
7625	9322 127 85682	IC socket 32P for 7999
7626	9352 613 73557	SAA4992H/V1
7630	4822 209 15882	MC33269D
7631	4822 209 15882	MC33269D
7634	9322 136 43682	MSM51V4223C-30RS
7638	4822 209 17307	MSM54V12222A-30JS
7639	5322 209 60424	74HC573
7640	4822 209 17307	MSM54V12222A-30JS
7999	3104 317 02011	Software FBX6 4.3

Full Dual Screen [M]

Various

1198	3104 301 08351	Cable phono-phono 120mm
0351	2422 025 15391	11P male h
0352	2422 025 15391	11P male h
0353	2422 025 15389	9P male h
1102	3139 147 14121	Tuner UV1316/A P-2
1107	4822 242 72211	Filter 5.5MHz
1109	4822 242 81436	Filter OFWK3953M
1525	4822 242 10695	Crystal 4.433 619 MHz
1528	4822 242 10697	Crystal 3.579 545 MHz
1800	2422 086 10581	Prot devV 65V 400mA
1021	3104 328 03321	FDS PIP EUR

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2101	4822 124 80195	470µF 20% 10V
2102	4822 126 13473	220nF 80-20% 50V
2104	4822 122 33177	10nF 20% 50V
2105	4822 122 33177	10nF 20% 50V
2106	4822 122 33575	220pF 5% 63V
2107	4822 126 13694	68pF 1% 63V
2108	5322 126 10225	1P5 5%
2110	4822 124 21913	1µF 20% 63V
2111	4822 126 14585	100nF 10% 50V
2116	4822 124 12095	100µF 20% 16V
2117	4822 126 14076	220nF 80-20% 25V
2118	3198 016 38280	8.2pF 50V 0603
2120	4822 126 13473	220nF 80-20% 50V
2122	5322 126 11579	3.3nF 10% 63V
2140	4822 126 14491	2.2µF 10V
2501	4822 126 14305	100nF 10% 16V 0603
2504	4822 126 14305	100nF 10% 16V 0603
2520	4822 126 14305	100nF 10% 16V 0603
2521	4822 126 14305	100nF 10% 16V 0603
2522	5322 126 11579	3.3nF 10% 63V
2525	4822 126 14507	18pF 5% 50V 0603
2528	4822 122 33752	15pF 5% 50V
2532	4822 126 14043	1µF 20% 16V
2534	5322 126 10223	4.7nF 10% 63V
2536	4822 126 14491	2.2µF 10V
2537	4822 126 13838	100nF 50V 20%
2538	4822 124 80151	47µF 16V
2539	4822 126 13838	100nF 50V 20%
2540	4822 124 80151	47µF 16V
2541	4822 126 14585	100nF 10% 50V
2545	4822 126 14305	100nF 10% 16V 0603
2748	4822 126 14305	100nF 10% 16V 0603
2749	4822 126 14305	100nF 10% 16V 0603
2752	4822 126 14305	100nF 10% 16V 0603
2753	4822 126 14305	100nF 10% 16V 0603
2754	4822 126 14305	100nF 10% 16V 0603
2755	4822 126 14305	100nF 10% 16V 0603
2756	4822 126 14305	100nF 10% 16V 0603
2757	4822 126 14305	100nF 10% 16V 0603
2758	4822 126 14043	1µF 20% 16V
2759	4822 126 14305	100nF 10% 16V 0603
2761	4822 126 14305	100nF 10% 16V 0603
2762	4822 126 14305	100nF 10% 16V 0603
2763	4822 126 14305	100nF 10% 16V 0603
2766	4822 126 14305	100nF 10% 16V 0603
2767	4822 126 14305	100nF 10% 16V 0603
2768	4822 126 14305	100nF 10% 16V 0603
2769	4822 126 14305	100nF 10% 16V 0603
2770	4822 126 14305	100nF 10% 16V 0603
2771	4822 126 14305	100nF 10% 16V 0603
2772	4822 126 14305	100nF 10% 16V 0603
2773	4822 126 14305	100nF 10% 16V 0603

2774	4822 126 14305	100nF 10% 16V 0603
2775	4822 126 14305	100nF 10% 16V 0603
2776	4822 126 14305	100nF 10% 16V 0603
2777	4822 126 14305	100nF 10% 16V 0603
2778	4822 126 14305	100nF 10% 16V 0603
2779	4822 126 14305	100nF 10% 16V 0603
2780	4822 126 14305	100nF 10% 16V 0603
2781	4822 126 14305	100nF 10% 16V 0603
2782	4822 126 14305	100nF 10% 16V 0603
2787	4822 126 14305	100nF 10% 16V 0603
2788	5322 122 32531	100pF 5% 50V
2789	4822 126 13692	47pF 1% 63V
2797	4822 124 12095	100µF 20% 16V
2798	4822 122 31765	100pF 2% 63V
2800	4822 126 13879	220nF 20% 16V
2801	4822 126 13879	220nF 20% 16V
2802	4822 126 13879	220nF 20% 16V
2803	4822 126 13879	220nF 20% 16V
2804	4822 126 13879	220nF 20% 16V
2805	4822 126 13879	220nF 20% 16V
2807	4822 126 13838	100nF 50V 20%
2840	4822 126 13838	100nF 50V 20%
2845	4822 122 31765	100pF 2% 63V
2860	4822 126 13838	100nF 50V 20%
2880	5322 124 41945	22µF 20% 35V
2881	4822 124 40433	47µF 20% 25V
2882	4822 124 11912	220µF 20% 6.3V
2883	4822 124 12095	100µF 20% 16V
2884	4822 126 14491	2.2µF 10V
2890	4822 126 14585	100nF 10% 50V
2891	4822 126 14585	100nF 10% 50V
2922	4822 126 14241	330pF 50V 0603
2923	4822 126 14305	100nF 10% 16V 0603
2932	4822 122 33753	150pF 5% 50V
2934	4822 126 14305	100nF 10% 16V 0603
2942	4822 122 33753	150pF 5% 50V
2944	4822 126 14305	100nF 10% 16V 0603
2972	4822 126 14241	330pF 50V 0603
2973	4822 126 14305	100nF 10% 16V 0603
2982	4822 122 33753	150pF 5% 50V
2983	4822 126 14305	100nF 10% 16V 0603
2992	4822 122 33753	150pF 5% 50V
2993	4822 126 14305	100nF 10% 16V 0603

3100	4822 117 10833	10k 1% 0.1W
3101	4822 051 20273	27k 5% 0.1W
3102	4822 051 20562	5k6 5% 0.1W 0805
3103	4822 051 20101	100Ω 5% 0.1W
3104	4822 051 20101	100Ω 5% 0.1W
3106	4822 117 11927	75Ω 1% 0.1W
3118	4822 051 20391	390Ω 5% 0.1W
3119	4822 117 12521	68Ω 1% 0.1W
3124	4822 051 20101	100Ω 5% 0.1W
3135	4822 051 20472	4k7 5% 0.1W
3136	4822 117 11503	220Ω 1% 0.1W
3137	4822 051 10102	1k 2% 0.25W
3138	4822 117 11504	270Ω 1% 0.1W
3139	4822 117 11139	1k5 1% 0.1W
3140	4822 051 20393	39k 5% 0.1W
3144	4822 117 13632	100k 1% 0603 0.62W
3145	4822 051 20121	120Ω 5% 0.1W
3146	4822 051 20223	22k 5% 0.1W
3151▲	4822 052 10128	1Ω2 5% 0.33W
3501	4822 051 30101	100Ω 5% 0.062W
3504	4822 051 30101	100Ω 5% 0.062W
3521	4822 117 13632	100k 1% 0603 0.62W
3530	4822 051 30101	100Ω 5% 0.062W
3531	4822 051 30101	100Ω 5% 0.062W
3532	4822 116 83933	15k 1% 0.1W
3538▲	4822 052 10478	4Ω7 5% 0.33W
3545	4822 051 30471	470Ω 5% 0.062W
3546	4822 051 30471	470Ω 5% 0.062W
3550	4822 051 20471	470Ω 5% 0.1W
3750	4822 051 30393	39k 5% 0.062W
3751	4822 051 30393	39k 5% 0.062W
3752	4822 051 30103	10k 5% 0.062W
3753	4822 051 30332	3k3 5% 0.062W
3754	4822 117 11817	1k2 1% 1/16W
3755	4822 117 13632	100k 1% 0603 0.62W
3756	4822 051 30101	100Ω 5% 0.062W
3757	4822 051 30101	100Ω 5% 0.062W
3800	4822 117 12139	22Ω 5% 0.062W
3801	4822 117 12139	22Ω 5% 0.062W
3802	4822 117 12139	22Ω 5% 0.062W
3840	4822 117 11503	220Ω 1% 0.1W
3841	4822 117 11503	220Ω 1% 0.1W
3842	4822 117 11503	220Ω 1% 0.1W
3843	4822 117 11503	220Ω 1% 0.1W
3844	4822 051 30103	10k 5% 0.062W
3845	4822 117 13632	100k 1% 0603 0.62W
3880	4822 051 30102	1k 5% 0.062W
3923	4822 051 30471	470Ω 5% 0.062W
3924	4822 051 30101	100Ω 5% 0.062W
3928	4822 051 30101	100Ω 5% 0.062W
3930	4822 051 30151	150Ω 5% 0.062W
3932	4822 051 30101	100Ω 5% 0.062W
3935	4822 051 30102	1k 5% 0.062W
3937	3198 021 90030	0Ω jumper 0603
3940	4822 051 30151	150Ω 5% 0.062W
3942	4822 051 30101	100Ω 5% 0.062W
3943	4822 051 30102	1k 5% 0.062W
3947	3198 021 90030	0Ω jumper 0603
3950	4822 117 11504	270Ω 1% 0.1W
3951	4822 051 20339	33Ω 5% 0.1W
3952	4822 117 11504	270Ω 1% 0.1W
3953	4822 117 11448	180Ω 1% 0.1W
3954	4822 051 20391	390Ω 5% 0.1W
3955	4822 117 11503	220Ω 1% 0.1W
3956	4822 117 10361	680Ω 1% 0.1W
3957	4822 117 10361	680Ω 1% 0.1W
3958	4822 117 10361	680Ω 1% 0.1W
3960	4822 051 10102	1k 2% 0.25W
3961	4822 051 10102	1k 2% 0.25W
3962	4822 051 10102	1k 2% 0.25W
3963	4822 051 10102	1k 2% 0.25W
3964	4822 051 10102	1k 2% 0.25W
3965	4822 051 10102	1k 2% 0.25W
3966	4822 051 20479	47Ω 5% 0.1W
3967	4822 051 20479	47Ω 5% 0.1W
3968	4822 051 20479	47Ω 5% 0.1W
3972	4822 051 30471	470Ω 5% 0.062W
3974	4822 051 30101	100Ω 5% 0.062W
3978	4822 051 30101	100Ω 5% 0.062W
3980	4822 051 30151	150Ω 5% 0.062W
3981	4822 051 30101	100Ω 5% 0.062W
3983	4822 051 30102	1k 5% 0.062W
3987	3198 021 90030	0Ω jumper 0603
3990	4822 051 30151	150Ω 5% 0.062W
3991	4822 051 30101	100Ω 5% 0.062W
3992	4822 051 30102	1k 5% 0.062W
3997	3198 021 90030	0Ω jumper 0603
3999	4822 117 11449	2k2 1% 0.1W
4xxx	4822 051 10008	0Ω jumper 1206
4xxx	4822 051 20008	0Ω jumper 0805
4xxx	3198 021 90030	0Ω jumper 0603

5101	4822 157 11775	6.8µH 5%
5102	3198 018 35670	0.56µH 10% 0805
5103	4822 157 11776	Coil var. 40.4MHz
5106	4822 157 10977	4.7µH 10%
5108	4822 157 11534	Coil var. 78MHz
5501	4822 157 11775	6.8µH 5%
5502	4822 157 11775	6.8µH 5%
5752	4822 157 71694	0.82µH 10%
5880	2422 535 94406	2.7µH 10%
5881	4822 157 71694	0.82µH 10%
5882	4822 157 71694	0.82µH 10%
5921	4822 157 71411	3.3µH 10%
5971	4822 157 71411	3.3µH 10%

6106	4822 130 83757	BAS216
6107	4822 130 83757	BAS216
6753	4822 130 10414	BA792
6850	4822 130 10414	BA792
6880	4822 130 11088	BZX284-C2V4
6881	4822 130 11088	BZX284-C2V4
6883	4822 130 11422	PLVA2650A
6884	4822 130 11422	PLVA2650A

7107	4822 130 60373	BC856B
7111	4822 130 60511	BC847B
7501	4822 209 16981	TDA9320H/N1
7502	4822 130 60511	BC847B
7700	9352 615 51557	SAB9079HS/N1
7750	9322 124 83668	MSM5416283-60GS
7800	4822 209 12776	TDA8601T/C1
7821	9322 135 04668	74V1G08
7840	5322 209 11296	74HC4053N
7850	4822 209 73852	PMBT2369
7851	4822 130 10255	MMUN2213
7860	4822 209 13252	PCF8574TS/F3
7880	4822 209 15882	MC33269D
7881	4822 209 15882	MC33269D
7900	4822 130 60383	BF824
7901	4822 130 60383	BF824
7902	4822 130 60383	BF824
7903	4822 130 60383	BF824
7904	4822 130 60383	BF824
7905	4822 130 60383	BF824
7920	4822 130 60511	BC847B
7930	4822 130 60511	BC847B
7940	4822 130 60511	BC847B
7970	4822 130 60511	BC847B
7980	4822 130 60511	BC847B
7990	4822 130 60511	BC847B
7991	4822 209 16868	M24C04-WMN6

Multi Channel Sound [N]

Various

0328	4822 267 10981	11P
0329	4822 267 10962	11P
0330	2422 025 14904	7P male v
0347	4822 267 10969	3P
0373	4822 267 10978	7P
0381	4822 267 10963	3P
1705	2422 086 10581	Prot dev. 65V 400mA
1804	2422 543 01016	Crystal 40MHz
1806	2422 543 01015	Crystal 10MHz
1805	4822 242 10964	Crystal 16.9344MHz
1807	4822 252 51169	Fuse 0,250A
1998	2422 025 16194	Socket 8P for transmitter
1999	2422 026 04961	Socket cinch 6P
8328	3104 301 08912	Cable 11P 220mm
8373	3104 301 08922	Cable 7P 280mm
8381	3104 301 08932	Cable 3P 140mm

2500	4822 126 14315	390pF 5% 50V 0603
2501	4822 126 14315	390pF 5% 50V 0603
2504	5322 126 11583	10nF 10% 50V 0603
2505	4822 126 14305	100nF 10% 16V 0603
2506	4822 126 14305	100nF 10% 16V 0603
2507	4822 126 11671	33pF
2508	4822 126 11671	33pF
2511	4822 126 12105	33nF 5% 50V
2517	4822 122 31765	100pF 2% 63V
2534	5322 126 11583	10nF 10% 50V 0603
2539	4822 126 14506	270pF 5% 50V 0603
2540	4822 126 14305	100nF 10% 16V 0603
2541	4822 126 14305	100nF 10% 16V 0603
2542	5322 124 41979	10µF 10% 16V
2543	5322 124 41979	10µF 10% 16V
2545	5322 124 41979	10µF 10% 16V
2546	5322 124 41979	10µF 10% 16V
2548	4822 126 14549	33nF 16V O6O3
2549	5322 126 11579	3.3nF 10% 63V
2551	4822 126 14549	33nF 16V O6O3
2552	4822 126 14549	33nF 16V O6O3
2553	3198 017 34730	47nF 16V 0603
2555	5322 124 41979	10µF 10% 16V
2556	5322 126 11579	3.3nF 10% 63V
2557	4822 126 14549	33nF 16V O6O3
2560	3198 017 34730	47nF 16V 0603
2562	5322 124 41979	10µF 10% 16V
2563	5322 124 41979	10µF 10% 16V
2564	5322 124 41979	10µF 10% 16V
2565	4822 126 14305	100nF 10% 16V 0603
2566	4822 126 14305	100nF 10% 16V 0603
2567	4822 126 11671	33pF
2568	4822 126 11671	33pF
2569	5322 124 41979	10µF 10% 16V
2570	4822 126 14305	100nF 10% 16V 0603
2571	4822 126 14305	100nF 10% 16V 0603
2572	5322 124 41979	10µF 10% 16V
2573	5322 124 41979	10µF 10% 16V
2574	5322 124 41979	10µF 10% 16V
2575	5322 124 41979	10µF 10% 16V
2576	5322 124 41979	10µF 10% 16V
2577	5322 124 41979	10µF 10% 16V
2578	4822 126 14549	33nF 16V O6O3
2579	5322 126 11579	3.3nF 10% 63V
2580	4822 126 14549	33nF 16V O6O3
2583	3198 017 34730	47nF 16V 0603
2585	4822 126 11671	33pF
2586	5322 126 11579	3.3nF 10% 63V
2587	4822 126 14494	22nF 10% 25V 0603

2590	3198 017 34730	47nF 16V 0603
2592	5322 124 41979	10µF 10% 16V
2593	5322 124 41979	10µF 10% 16V
2594	5322 124 41979	10µF 10% 16V
2595	4822 126 14305	100nF 10% 16V 0603
2596	4822 126 14305	100nF 10% 16V 0603
2597	4822 126 11671	33pF
2598	4822 126 11671	33pF
2599	5322 126 11583	10nF 10% 50V 0603
2600	4822 126 14305	100nF 10% 16V 0603
2601	4822 126 14305	100nF 10% 16V 0603
2602	5322 124 41979	10µF 10% 16V
2603	5322 124 41979	10µF 10% 16V
2605	5322 124 41979	10µF 10% 16V
2606	5322 124 41979	10µF 10% 16V
2607	5322 124 41979	10µF 10% 16V
2609	5322 126 11579	3.3nF 10% 63V
2611	4822 124 22652	2.2µF 20% 50V
2612	4822 124 40207	100µF 20% 25V
2613	3198 017 34730	47nF 16V 0603
2620	3198 017 34730	47nF 16V 0603
2622	5322 124 41979	10µF 10% 16V
2623	5322 124 41979	10µF 10% 16V
2624	5322 124 41979	10µF 10% 16V
2625	4822 126 14305	100nF 10% 16V 0603
2626	4822 126 14305	100nF 10% 16V 0603
2627	4822 126 11671	33pF
2628	4822 126 11671	33pF
2635	4822 126 14305	100nF 10% 16V 0603
2636	4822 126 14305	100nF 10% 16V 0603
2637	5322 121 42498	680nF 5% 63V
2638	5322 121 42498	680nF 5% 63V
2639	4822 126 14305	100nF 10% 16V 0603
2641	5322 121 42498	680nF 5% 63V
2643	4822 126 11671	33pF
2667	4822 126 14494	22nF 10% 25V 0603
2668	5322 126 11583	10nF 10% 50V 0603
2669	4822 126 11671	33pF
2679	4822 126 14585	100nF 10% 50V
2680	4822 126 14585	100nF 10% 50V
2681	5322 122 32659	33pF 5% 50V
2682	5322 122 32659	33pF 5% 50V
2690	4822 126 14305	100nF 10% 16V 0603
2704	4822 126 14305	100nF 10% 16V 0603
2705	4822 124 12095	100µF 20% 16V
2706	4822 126 14585	100nF 10% 50V
2707	4822 124 40207	100µF 20% 25V
2708	4822 126 14585	100nF 10% 50V
2709	4822 124 21913	1µF 20% 63V
2710	4822 124 40207	100µF 20% 25V
2711	4822 126 14585	100nF 10% 50V
2712	4822 124 21913	1µF 20% 63V
2713	4822 126 14585	100nF 10% 50V
2715	5322 122 32531	100pF 5% 50V
2716	4822 122 33575	220pF 5% 63V
2717	5322 122 32531	100pF 5% 50V
2718	4822 122 33575	220pF 5% 63V
2719	5322 122 32531	100pF 5% 50V
2720	4822 122 33575	220pF 5% 63V
2721	5322 122 32531	100pF 5% 50V
2722	4822 122 33575	220pF 5% 63V
2724	5322 122 32531	100pF 5% 50V
2725	5322 122 32531	100pF 5% 50V
2726	4822 122 33575	220pF 5% 63V
2727	4822 126 14585	100nF 10% 50V
2728	4822 126 14305	100nF 10% 16V 0603
2729	4822 126 14585	100nF 10% 50V
2730	5322 122 32531	100pF 5% 50V
2731	5322 122 32531	100pF 5% 50V
2732	5322 122 32531	100pF 5% 50V
2733	5322 122 32531	100pF 5% 50V
2736	4822 124 40248	10µF 20% 63V
2737	4822 126 14585	100nF 10% 50V
2738	4822 124 40207	100µF 20% 25V
2740	5322 126 11583	10nF 10% 50V 0603
2741	5322 126 11583	10nF 10% 50V 0603
2745	4822 126 14494	22nF 10% 25V 0603
2746	5322 126 11583	10nF 10% 50V 0603
2747	5322 126 11583	10nF 10% 50V 0603
2749	4822 126 14494	22nF 10% 25V 0603
2752	5322 126 11583	10nF 10% 50V 0603
2753	5322 126 11583	10nF 10% 50V 0603
2755	4822 126 14494	22nF 10% 25V 0603
2780	4822 126 14305	100nF 10% 16V 0603
2781	4822 126 14305	100nF 10% 16V 0603
2784	5322 122 31865	1.5nF 10% 63V
2785	5322 122 31865	1.5nF 10% 63V
2786	4822 126 11671	33pF
2787	4822 126 11671	33pF
2790	4822 122 33177	10nF 20% 50V
2791	4822 124 22652	2.2µF 20% 50V
2793	4822 126 14506	270pF 5% 50V 0603
2794	5322 126 11583	10nF 10% 50V 0603
2795	5322 126 11583	10nF 10% 50V 0603
2796	4822 122 33177	10nF 20% 50V
2797	4822 124 22652	2.2µF 20% 50V
2800	4822 126 14585	100nF 10% 50V
2802	4822 126 14585	100nF 10% 50V
2807	4822 126 14585	100nF 10% 50V
2809	4822 126 14585	100nF 10% 50V
2810	4822 126 14585	100nF 10% 50V
2811	4822 124 80151	47µF 16V
2812	4822 126 14305	100nF 10% 16V 0603
2813	4822 126 14305	100nF 10% 16V 0603
2814	4822 126 14305	100nF 10% 16V 0603
2815	4822 126 14305	100nF 10% 16V 0603
2816	4822 126 14305	100nF 10% 16V 0603
2817	4822 126 14585	100nF 10% 50V
2818	4822 126 14305	100nF 10% 16V 0603
2819	4822 126 14305	100nF 10% 16V 0603
2820	4822 126 13486	15pF 2% 63V
2821	4822 126 13486	15pF 2% 63V
2822	4822 126 14585	100nF 10% 50V
2823	4822 124 80151	47µF 16V
2824	4822 126 14585	100nF 10% 50V
2825	4822 126 14585	100nF 10% 50V
2826	4822 126 14305	100nF 10% 16V 0603
2827	4822 126 14305	100nF 10% 16V 0603
2828	4822 124 80151	47µF 16V
2829	4822 126 14305	100nF 10% 16V 0603
2830	4822 126 14305	100nF 10% 16V 0603
2831	5322 126 11583	10nF 10% 50V 0603
2832	3198 016 31020	0603 25V 1nF
2833	4822 126 13486	15pF 2% 63V
2834	4822 126 13486	15pF 2% 63V
2835	4822 124 80151	47µF 16V
2836	4822 126 14305	100nF 10% 16V 0603
2837	4822 122 33177	10nF 20% 50V
2838	4822 122 33761	22pF 5% 50V
2839	4822 122 33761	22pF 5% 50V
2840	4822 124 80151	47µF 16V
2841	4822 126 14585	100nF 10% 50V
2842	4822 124 80151	47µF 16V
2843	4822 126 14305	100nF 10% 16V 0603
2844	4822 124 80151	47µF 16V
2845	4822 126 14585	100nF 10% 50V
2846	4822 124 80151	47µF 16V
2847	5322 126 10511	1nF 5% 50V
2848	4822 122 31765	100pF 2% 63V
2849	4822 126 14585	100nF 10% 50V
2850	5322 122 32531	100pF 5% 50V
2851	5322 126 10511	1nF 5% 50V
2852	5322 122 32531	100pF 5% 50V
2853	4822 124 80151	47µF 16V
2854	5322 126 10511	1nF 5% 50V
2855	4822 124 80151	47µF 16V
2856	5322 126 10511	1nF 5% 50V
2857	4822 124 80151	47µF 16V
2858	5322 126 10511	1nF 5% 50V
2859	4822 124 80151	47µF 16V
2860	4822 126 14585	100nF 10% 50V
2861	4822 124 80151	47µF 16V
2862	5322 126 10511	1nF 5% 50V
2863	4822 124 80151	47µF 16V
2864	4822 126 14585	100nF 10% 50V
2865	4822 126 14585	100nF 10% 50V
2866	4822 126 14585	100nF 10% 50V
2867	4822 124 80151	47µF 16V
2868	4822 126 14585	100nF 10% 50V
2869	4822 126 14585	100nF 10% 50V
2870	4822 124 80151	47µF 16V
2871	4822 124 80151	47µF 16V
2872	5322 122 32531	100pF 5% 50V
2873	5322 126 10511	1nF 5% 50V
2874	4822 124 80151	47µF 16V
2875	4822 126 14585	100nF 10% 50V
2876	4822 124 80151	47µF 16V
2877	5322 122 32531	100pF 5% 50V
2878	5322 126 10511	1nF 5% 50V
2879	4822 124 80151	47µF 16V
2880	5322 126 10511	1nF 5% 50V
2881	4822 124 80151	47µF 16V
2882	5322 126 10511	1nF 5% 50V
2883	5322 122 32531	100pF 5% 50V
2885	4822 122 33761	22pF 5% 50V
2886	4822 122 33761	22pF 5% 50V
2887	4822 122 33761	22pF 5% 50V
2888	4822 122 33761	22pF 5% 50V
2889	4822 122 33761	22pF 5% 50V
2890	4822 122 33761	22pF 5% 50V
2891	4822 122 33761	22pF 5% 50V
2892	4822 122 33761	22pF 5% 50V
2893	4822 122 33761	22pF 5% 50V
2894	4822 122 33761	22pF 5% 50V
2900	5322 122 32531	100pF 5% 50V
2901	4822 122 31765	100pF 2% 63V
2909	4822 123 14025	2200µF 20% 16V

3500	4822 051 30332	3k3 5% 0.062W
3501	4822 051 30332	3k3 5% 0.062W
3504	4822 051 30121	120Ω 5% 0.062W
3505	4822 051 30103	10k 5% 0.062W
3506	4822 051 30103	10k 5% 0.062W
3507	4822 051 30103	10k 5% 0.062W
3508	4822 051 30103	10k 5% 0.062W
3510	4822 051 30103	10k 5% 0.062W
3511	4822 051 30103	10k 5% 0.062W
3513	4822 051 30103	10k 5% 0.062W
3514	4822 051 30103	10k 5% 0.062W
3515	4822 051 30562	5k6 5% 0.063W 0603
3516	4822 051 30123	12k 5% 0.062W
3517	4822 051 30562	5k6 5% 0.063W 0603
3518	4822 051 30123	12k 5% 0.062W
3530	4822 051 30682	6k8 5% 0.062W
3531	4822 051 30103	10k 5% 0.062W
3532	4822 051 30682	6k8 5% 0.062W
3533	4822 051 30103	10k 5% 0.062W
3534	4822 051 30121	120Ω 5% 0.062W
3540	4822 117 13632	100k 1% 0603 0.62W
3541	4822 051 30109	10Ω 5% 0.062W
3543	4822 051 30103	10k 5% 0.062W
3544	4822 051 30123	12k 5% 0.062W
3545	4822 051 30123	12k 5% 0.062W
3547	4822 051 30101	100Ω 5% 0.062W
3548	4822 117 13632	100k 1% 0603 0.62W
3550	4822 051 30153	15k 5% 0.062W
3551	4822 051 30563	56k 5% 0.062W
3553	4822 051 30103	10k 5% 0.062W
3554	4822 051 30101	100Ω 5% 0.062W
3555	4822 117 12925	47k 1% 0.063W 0603
3556	4822 117 12903	1k8 1% 0.063W 0603
3557	4822 051 30103	10k 5% 0.062W
3558	4822 051 30153	15k 5% 0.062W
3559	4822 051 30152	1k5 5% 0.062W
3560	4822 051 30103	10k 5% 0.062W
3561	4822 051 30103	10k 5% 0.062W
3562	4822 051 30563	56k 5% 0.062W
3563	4822 051 30103	10k 5% 0.062W
3564	4822 051 30152	1k5 5% 0.062W
3565	4822 051 30103	10k 5% 0.062W
3567	4822 051 30101	100Ω 5% 0.062W
3568	4822 051 30683	68k 5% 0.062W
3569	4822 051 30683	68k 5% 0.062W
3571	4822 051 30109	10Ω 5% 0.062W
3573	4822 051 30103	10k 5% 0.062W
3575	4822 051 30101	100Ω 5% 0.062W
3576	4822 051 30472	4k7 5% 0.062W
3580	4822 117 11817	1k2 1% 1/16W
3581	4822 117 12903	1k8 1% 0.063W 0603
3582	4822 117 11817	1k2 1% 1/16W
3583	4822 051 30103	10k 5% 0.062W
3584	4822 117 12903	1k8 1% 0.063W 0603
3585	4822 117 11817	1k2 1% 1/16W
3587	4822 051 30103	10k 5% 0.062W
3589	4822 051 30152	1k5 5% 0.062W
3590	4822 051 30103	10k 5% 0.062W
3591	4822 051 30103	10k 5% 0.062W
3593	4822 051 30103	10k 5% 0.062W
3594	4822 051 30152	1k5 5% 0.062W
3595	4822 051 30103	10k 5% 0.062W
3596	4822 051 30101	100Ω 5% 0.062W
3601	4822 051 30109	10Ω 5% 0.062W
3602	4822 117 13632	100k 1% 0603 0.62W
3603	4822 051 30103	10k 5% 0.062W
3605	4822 051 30333	33k 5% 0.062W
3606	4822 117 13632	100k 1% 0603 0.62W
3607	4822 117 13632	100k 1% 0603 0.62W
3608	4822 051 30472	4k7 5% 0.062W
3609	4822 051 30272	2k7 5% 0.062W
3610	4822 117 10837	100k 1% 0.1W
3611	4822 117 10833	10k 1% 0.1W
3612	4822 051 30123	12k 5% 0.062W
3613	4822 051 30103	10k 5% 0.062W
3614	4822 051 30153	15k 5% 0.062W
3615	4822 117 13632	100k 1% 0603 0.62W
3616	4822 117 13632	100k 1% 0603 0.62W
3617	4822 051 30103	10k 5% 0.062W
3619	4822 051 30152	1k5 5% 0.062W
3620	4822 051 30103	10k 5% 0.062W
3621	4822 051 30103	10k 5% 0.062W

3623	4822 051 30103	10k 5% 0.062W
3624	4822 051 30152	1k5 5% 0.062W
3625	4822 051 30103	10k 5% 0.062W
3626	4822 117 10837	100k 1% 0.1W
3627	4822 117 10837	100k 1% 0.1W
3628	4822 117 10837	100k 1% 0.1W
3629	4822 117 10837	100k 1% 0.1W
3630	4822 117 10834	47k 1% 0.1W
3631	4822 117 13632	100k 1% 0603 0.62W
3632	4822 117 12925	47k 1% 0.063W 0603
3633	4822 117 13632	100k 1% 0603 0.62W
3634	4822 051 30563	56k 5% 0.062W
3638	4822 051 30102	1k 5% 0.062W
3639	4822 051 30339	33Ω 5% 0.062W
3640	4822 051 30472	4k7 5% 0.062W
3645	4822 117 11507	6k8 1% 0.1W
3646	4822 051 20332	3k3 5% 0.1W
3647	4822 117 11507	6k8 1% 0.1W
3648	4822 051 20332	3k3 5% 0.1W
3649	4822 051 30681	680Ω 5% 0.062W
3650	4822 117 11507	6k8 1% 0.1W
3651	4822 051 30333	33k 5% 0.062W
3652	4822 117 11507	6k8 1% 0.1W
3653	4822 117 11507	6k8 1% 0.1W
3658	4822 051 30682	6k8 5% 0.062W
3659	4822 051 30222	2k2 5% 0.062W
3660	4822 051 30682	6k8 5% 0.062W
3661	4822 051 30222	2k2 5% 0.062W
3663	4822 051 20332	3k3 5% 0.1W
3664	4822 051 20332	3k3 5% 0.1W
3667	4822 117 10837	100k 1% 0.1W
3671	4822 117 10833	10k 1% 0.1W
3673	4822 117 10833	10k 1% 0.1W
3675	4822 117 10837	100k 1% 0.1W
3676	4822 117 10833	10k 1% 0.1W
3678	4822 117 10833	10k 1% 0.1W
3679	4822 117 11507	6k8 1% 0.1W
3680	4822 117 11507	6k8 1% 0.1W
3682	4822 117 10837	100k 1% 0.1W
3683	4822 051 20332	3k3 5% 0.1W
3684	4822 117 10837	100k 1% 0.1W
3685	4822 117 10837	100k 1% 0.1W
3686	4822 117 10837	100k 1% 0.1W
3687	4822 051 20332	3k3 5% 0.1W
3688	4822 117 11507	6k8 1% 0.1W
3699	4822 117 10833	10k 1% 0.1W
3700	4822 117 10833	10k 1% 0.1W
3701	4822 117 13632	100k 1% 0603 0.62W
3702	4822 051 30331	330Ω 5% 0.062W
3703	4822 051 30391	390Ω 5% 0.062W
3704	4822 051 30103	10k 5% 0.062W
3705	4822 051 30221	220Ω 5% 0.062W
3706	4822 051 30221	220Ω 5% 0.062W
3707	4822 051 20471	470Ω 5% 0.1W
3708	4822 051 20471	470Ω 5% 0.1W
3709	4822 051 20471	470Ω 5% 0.1W
3710	4822 117 10837	100k 1% 0.1W
3711	4822 117 10833	10k 1% 0.1W
3712	4822 117 10837	100k 1% 0.1W
3713	4822 117 10833	10k 1% 0.1W
3715	4822 051 20471	470Ω 5% 0.1W
3716	4822 051 20223	22k 5% 0.1W
3717	4822 051 20471	470Ω 5% 0.1W
3718	4822 051 20223	22k 5% 0.1W
3719	4822 051 20471	470Ω 5% 0.1W
3720	4822 051 20223	22k 5% 0.1W
3721	4822 051 20471	470Ω 5% 0.1W
3722	4822 051 20223	22k 5% 0.1W
3724	4822 051 20223	22k 5% 0.1W
3725	4822 051 20471	470Ω 5% 0.1W
3726	4822 051 20223	22k 5% 0.1W
3727	4822 051 30103	10k 5% 0.062W
3728	4822 051 30333	33k 5% 0.062W
3729	4822 051 30683	68k 5% 0.062W
3730	4822 117 10353	150Ω 1% 0.1W
3731	4822 051 20223	22k 5% 0.1W
3732	4822 117 10353	150Ω 1% 0.1W
3733	4822 051 20223	22k 5% 0.1W
3734	4822 117 11503	220Ω 1% 0.1W
3735	4822 117 11503	220Ω 1% 0.1W
3737	4822 051 30683	68k 5% 0.062W
3738	4822 051 20471	470Ω 5% 0.1W
3739	4822 051 20471	470Ω 5% 0.1W
3740	4822 117 12902	8k2 1% 0.063W 0603
3741	4822 117 12902	8k2 1% 0.063W 0603
3742	4822 051 30392	3k9 5% 0.063W 0603
3743	4822 051 30101	100Ω 5% 0.062W
3744	4822 051 30271	270Ω 5% 0.062W
3745	4822 051 30102	1k 5% 0.062W
3746	4822 117 12902	8k2 1% 0.063W 0603
3747	4822 117 12902	8k2 1% 0.063W 0603
3748	4822 051 30392	3k9 5% 0.063W 0603
3749	4822 051 30101	100Ω 5% 0.062W
3750	4822 051 30271	270Ω 5% 0.062W
3751	4822 051 30102	1k 5% 0.062W
3752	4822 117 12902	8k2 1% 0.063W 0603
3753	4822 117 12902	8k2 1% 0.063W 0603
3754	4822 051 30392	3k9 5% 0.063W 0603
3755	4822 051 30101	100Ω 5% 0.062W
3756	4822 051 30271	270Ω 5% 0.062W
3757	4822 051 30102	1k 5% 0.062W
3758	4822 051 30472	4k7 5% 0.062W
3759	4822 051 30472	4k7 5% 0.062W
3760	4822 051 30472	4k7 5% 0.062W
3761	4822 117 10834	47k 1% 0.1W
3762	4822 051 20223	22k 5% 0.1W
3763	4822 051 20472	4k7 5% 0.1W
3764	4822 051 10102	1k 2% 0.25W
3766	4822 051 20561	560Ω 5% 0.1W
3769	4822 051 20561	560Ω 5% 0.1W
3784	4822 051 10102	1k 2% 0.25W
3785	4822 051 10102	1k 2% 0.25W
3786	4822 051 30332	3k3 5% 0.062W
3787	4822 051 30682	6k8 5% 0.062W
3788	4822 051 30332	3k3 5% 0.062W
3789	4822 051 30682	6k8 5% 0.062W
3790	4822 051 20121	120Ω 5% 0.1W
3791	4822 051 30102	1k 5% 0.062W
3792	4822 051 30563	56k 5% 0.062W
3793	4822 051 30153	15k 5% 0.062W
3795	4822 051 30223	22k 5% 0.062W
3796	4822 051 20121	120Ω 5% 0.1W
3799	4822 051 20223	22k 5% 0.1W
3800	4822 117 11927	75Ω 1% 0.1W
3801	4822 117 11927	75Ω 1% 0.1W
3803▲	4822 117 11151	1Ω 5%
3804	4822 051 20105	1M 5% 0.1W
3805	4822 117 10833	10k 1% 0.1W
3807	4822 051 30101	100Ω 5% 0.062W
3808	4822 051 30103	10k 5% 0.062W
3809	4822 051 30101	100Ω 5% 0.062W
3810	4822 051 20101	100Ω 5% 0.1W
3811	4822 051 30101	100Ω 5% 0.062W
3812	4822 051 20101	100Ω 5% 0.1W
3813	4822 051 30101	100Ω 5% 0.062W
3814	4822 051 20101	100Ω 5% 0.1W
3815	4822 051 20101	100Ω 5% 0.1W
3816	4822 051 30103	10k 5% 0.062W
3817	4822 051 30103	10k 5% 0.062W
3818	4822 051 30103	10k 5% 0.062W
3819	4822 051 30103	10k 5% 0.062W
3820	4822 051 30103	10k 5% 0.062W
3821	4822 051 30103	10k 5% 0.062W
3822▲	4822 117 12984	3Ω3 5% 0.125W 1206
3823▲	4822 117 12984	3Ω3 5% 0.125W 1206
3824	4822 117 11148	56k 1% 0.1W
3825	4822 051 20334	330k 5% 0.1W
3826	4822 051 20334	330k 5% 0.1W
3827	4822 117 11927	75Ω 1% 0.1W
3828	4822 051 30562	5k6 5% 0.063W 0603
3829	4822 051 30562	5k6 5% 0.063W 0603
3830	4822 051 30123	12k 5% 0.062W
3831	4822 051 30123	12k 5% 0.062W
3834	4822 051 30151	150Ω 5% 0.062W
3835	4822 051 20333	33k 5% 0.1W
3836	4822 117 13579	220k 1% 0.1W 0805
3837	4822 051 20101	100Ω 5% 0.1W
3838▲	4822 117 12984	3Ω3 5% 0.125W 1206
3839	4822 051 30103	10k 5% 0.062W
3840	4822 051 30103	10k 5% 0.062W
3841	4822 051 30103	10k 5% 0.062W
3842	4822 051 30103	10k 5% 0.062W
3843	4822 051 30103	10k 5% 0.062W
3844	4822 117 10833	10k 1% 0.1W
3848	4822 051 20105	1M 5% 0.1W
3849	4822 051 30102	1k 5% 0.062W
3850	4822 117 10833	10k 1% 0.1W
3851▲	4822 117 12984	3Ω3 5% 0.125W 1206
3852▲	4822 117 13572	22Ω 5% 1206
3854	4822 117 10833	10k 1% 0.1W
3855▲	4822 117 12984	3Ω3 5% 0.125W 1206
3856▲	4822 117 13572	22Ω 5% 1206
3857	4822 051 20101	100Ω 5% 0.1W
3858	4822 051 30103	10k 5% 0.062W
3859	4822 051 30103	10k 5% 0.062W
3861	4822 117 10833	10k 1% 0.1W
3863	4822 117 10833	10k 1% 0.1W
3864	4822 051 20101	100Ω 5% 0.1W
3865	4822 051 30103	10k 5% 0.062W
3866	4822 117 10833	10k 1% 0.1W
3868	4822 051 20101	100Ω 5% 0.1W
3869	4822 117 10833	10k 1% 0.1W
3870	4822 051 20101	100Ω 5% 0.1W
3871	4822 117 10833	10k 1% 0.1W
3872	4822 051 20101	100Ω 5% 0.1W
3873	4822 117 10833	10k 1% 0.1W
3874	4822 051 20101	100Ω 5% 0.1W
3875	4822 117 10833	10k 1% 0.1W
3876▲	4822 117 12984	3Ω3 5% 0.125W 1206
3877▲	4822 117 12984	3Ω3 5% 0.125W 1206
3878	4822 117 10837	100k 1% 0.1W
3879	4822 051 20684	680k 5% 0.1W
3880	4822 117 10837	100k 1% 0.1W
3881	4822 051 20105	1M 5% 0.1W
3882	4822 051 20101	100Ω 5% 0.1W
3883	4822 117 10833	10k 1% 0.1W
3884	4822 051 20101	100Ω 5% 0.1W
3885	4822 117 10833	10k 1% 0.1W
3886	4822 051 30101	100Ω 5% 0.062W
3888	4822 051 30103	10k 5% 0.062W
3889	4822 051 20101	100Ω 5% 0.1W
3890	4822 051 30101	100Ω 5% 0.062W
3891	4822 051 20472	4k7 5% 0.1W
3892	4822 051 30101	100Ω 5% 0.062W
3893	4822 051 30101	100Ω 5% 0.062W
3894	4822 051 30101	100Ω 5% 0.062W
4xxx	4822 051 10008	0Ω jumper 1206
4xxx	4822 051 20008	0Ω jumper 0805
4xxx	3198 021 90030	0Ω jumper 0603

5704	4822 157 11876	6.8µH 10% 0805
5801	4822 157 71411	3.3µH 10%

6525	4822 130 11423	PLVA2656A
6600	4822 130 83757	BAS216
6637	4822 130 83757	BAS216
6638	4822 130 83757	BAS216
6708	4822 130 11416	PDZ6.8B
6709	4822 130 11416	PDZ6.8B
6710	4822 130 11666	BZX284-C8V2
6715	4822 130 11413	PDZ10B
6716	4822 130 11413	PDZ10B
6717	4822 130 11413	PDZ10B
6718	4822 130 11413	PDZ10B
6719	4822 130 11413	PDZ10B
6720	4822 130 11413	PDZ10B
6721	4822 130 11413	PDZ10B
6722	4822 130 11413	PDZ10B
6723	4822 130 11413	PDZ10B
6724	4822 130 11413	PDZ10B
6725	4822 130 11413	PDZ10B
6726	4822 130 11413	PDZ10B
6730	4822 130 11413	PDZ10B
6731	4822 130 11413	PDZ10B
6732	4822 130 11413	PDZ10B
6733	4822 130 11413	PDZ10B
6734	4822 130 11423	PLVA2656A
6801	4822 209 16978	LF33CV

7505	4822 209 30095	LM833D
7510	4822 130 60511	BC847B
7512	4822 130 60511	BC847B
7540	9322 127 49668	TDA7438D
7541	4822 209 30095	LM833D
7543	4822 209 30095	LM833D
7544	4822 209 30095	LM833D
7565	4822 209 30095	LM833D
7570	9322 127 49668	TDA7438D
7595	4822 209 30095	LM833D
7600	9322 127 49668	TDA7438D
7601	4822 130 60511	BC847B
7602	4822 130 60511	BC847B
7603	4822 130 60511	BC847B
7604	4822 130 60373	BC856B
7605	4822 130 60511	BC847B
7610	4822 130 60511	BC847B
7611	4822 130 60511	BC847B
7625	4822 209 30095	LM833D
7630	5322 209 11102	HEF4052BT
7635	4822 209 30095	LM833D
7665	5322 209 11102	HEF4052BT
7667	4822 130 60511	BC847B
7675	4822 130 60511	BC847B
7679	4822 209 30095	LM833D
7685	5322 209 11102	HEF4052BT

7690	4822 209 13252	PCF8574TS/F3
7695	5322 209 11102	HEF4052BT
7696	4822 130 60511	BC847B
7705	5322 209 81856	LM7912CT
7706	4822 209 81726	MC7812CT
7707	4822 130 60511	BC847B
7708	4822 130 60511	BC847B
7709	4822 130 60511	BC847B
7710	4822 130 60511	BC847B
7712	4822 130 60511	BC847B
7740	4822 209 30095	LM833D
7780	4822 209 30095	LM833D
7781	4822 130 60373	BC856B
7800	9351 705 10118	74LVT125D
7801	9352 629 51557	SAA2505H/M1
7802	4822 209 14863	LC8904Q
7803	3104 317 02021	Software V12
7804	4822 209 30095	LM833D
7805	4822 209 17423	UAD1328T
7806	9352 617 90118	UDA1344TS 7806 7806
7807	4822 130 60511	BC847B

Side I/O panel [O]

Various

0044	4822 402 11175	Bracket side I/O
0326	4822 267 10975	Socket 3 x cinch
0327	4822 267 31014	Socket headphone 3.5mm
0328	4822 265 11337	Socket SVHS
0333	4822 267 10962	11P male v
0344	4822 267 10963	3P
0346	4822 267 10967	3P male black
1047	3104 328 01391	Side I/O panel
8333	4822 320 12505	Cable 11P 820mm
8344	4822 320 12509	Cable 3P 820mm

2804	5322 122 32531	100pF 5% 50V
2805	5322 122 32531	100pF 5% 50V
2807	4822 126 14076	220nF 80-20% 25V
2810	4822 126 12105	33nF 5% 50V
2811	4822 124 40207	100µF 20% 25V
2813	4822 124 22652	2.2µF 20% 50V
2832	4822 122 33177	10nF 20% 50V
2834	4822 122 33177	10nF 20% 50V

3801	4822 116 52201	75Ω 5% 0.5W
3803	4822 050 11002	1k 1% 0.4W
3804	4822 050 11002	1k 1% 0.4W
3808	4822 051 20008	0Ω jumper 0805
3809	4822 051 20008	0Ω jumper 0805
3810	4822 051 20684	680k 5% 0.1W
3811	4822 051 20393	39k 5% 0.1W
3812	4822 051 20154	150k 5% 0.1W
3813	4822 051 20392	3k9 5% 0.1W
3814	4822 117 11449	2k2 1% 0.1W
3815	4822 051 20399	39Ω 5% 0.1W
3816	4822 051 20399	39Ω 5% 0.1W
3826	4822 116 52206	120Ω 5% 0.5W
3827	4822 116 52206	120Ω 5% 0.5W
3828	4822 116 52206	120Ω 5% 0.5W
3829	4822 116 52206	120Ω 5% 0.5W
3830	4822 050 21003	10k 1% 0.6W
3842	4822 050 21003	10k 1% 0.6W
3845	4822 116 52283	4k7 5% 0.5W
3846	4822 050 21003	10k 1% 0.6W
3847	4822 117 10833	10k 1% 0.1W
3848	4822 051 20562	5k6 5% 0.1W 0805
3849	4822 051 20332	3k3 5% 0.1W
3999	4822 117 11448	180Ω 1% 0.1W

5800	4822 157 11228	100µH 5%

6801	4822 130 11416	PDZ6.8B
6802	4822 130 11416	PDZ6.8B
6803	4822 130 11413	PDZ10B
6804	4822 130 11413	PDZ10B
6805	4822 130 11413	PDZ10B
6806	4822 130 11413	PDZ10B
6807	4822 130 11416	PDZ6.8B
6808	4822 130 11416	PDZ6.8B

7811	4822 130 60373	BC856B
7812	4822 130 60373	BC856B
7813	4822 130 60511	BC847B

Top control panel [P]

Various

0052	3104 304 19794	Top control frame
0053	3104 304 20921	Top control keypad
0345	4822 267 10748	3P male
1049	3104 328 00160	Top control panel
1701	4822 276 13775	Tact switch
1702	4822 276 13775	Tact switch
1703	4822 276 13775	Tact switch
1704	4822 276 13775	Tact switch
1705	4822 276 13775	Tact switch

3701	4822 051 20391	390Ω 5% 0.1W
3702	4822 117 13528	200Ω 1% 0.125W 0805
3703	4822 117 10845	620Ω 1% 0.1W
3704	4822 117 11534	1k1 1% 0.1W
3705	4822 117 11951	2k 1% 0.1W

Wireless transmitter [R]

Various

0320	4304 078 87600	Transmitter 864MHz
0320	4304 078 87610	Transmitter 433MHz
1102	3104 217 06120	864MHz modulator
1102	4822 218 11567	433MHz modulator

2100	4822 126 14043	1µF 20% 16V
2101	4822 126 14043	1µF 20% 16V
2102	4822 126 13222	390pF 2% 63V
2103	4822 126 13222	390pF 2% 63V
2104	4822 126 13222	390pF 2% 63V
2105	4822 126 13222	390pF 2% 63V
2106	4822 126 13222	390pF 2% 63V
2107	4822 126 13222	390pF 2% 63V
2108	4822 126 13222	390pF 2% 63V
2109	4822 126 13222	390pF 2% 63V
2110	4822 126 10326	180pF 5% 63V
2111	4822 126 10326	180pF 5% 63V
2112	4822 126 10326	180pF 5% 63V
2113	4822 126 10326	180pF 5% 63V
2114	4822 124 22652	2.2µF 20% 50V
2115	4822 124 22652	2.2µF 20% 50V
2116	5322 122 32268	470pF 10% 50V
2117	5322 122 32268	470pF 10% 50V
2118	5322 126 10223	4.7nF 10% 63V
2119	5322 126 10223	4.7nF 10% 63V
2120	4822 124 40248	10µF 20% 63V
2121	4822 124 40248	10µF 20% 63V
2122	4822 121 51319	1µF 10% 63V
2123	4822 121 51319	1µF 10% 63V
2124	4822 124 22652	2.2µF 20% 50V
2125	4822 124 22652	2.2µF 20% 50V
2126	5322 122 32654	22nF 10% 63V
2127	5322 122 32654	22nF 10% 63V
2128	4822 124 22652	2.2µF 20% 50V
2129	4822 124 22652	2.2µF 20% 50V
2130	4822 124 22652	2.2µF 20% 50V
2131	4822 124 22652	2.2µF 20% 50V
2132	4822 126 13692	47pF 1% 63V
2133	4822 126 13692	47pF 1% 63V
2134	4822 124 40248	10µF 20% 63V
2135	4822 124 40248	10µF 20% 63V
2136	5322 122 32268	470pF 10% 50V
2137	4822 124 81151	22µF 50V
2138	5322 122 31647	1nF 10% 63V
2139	5322 122 32268	470pF 10% 50V
2141	4822 126 13482	470nF 80/20% 16V
2142	4822 124 81151	22µF 50V
2143	4822 122 32535	680pF 10% 63V
2144	4822 126 13695	82pF 1% 63V
2147	5322 122 32654	22nF 10% 63V
2150	4822 126 13473	220nF 80-20% 50V
2151	4822 126 13692	47pF 1% 63V
2152	4822 126 13692	47pF 1% 63V
2153	4822 126 14585	100nF 10% 50V
2154	4822 126 14585	100nF 10% 50V
2155	4822 126 14585	100nF 10% 50V
2156	4822 124 40196	220µF 20% 16V
2157	4822 124 40196	220µF 20% 16V
2158	4822 124 40207	100µF 20% 25V
2162	5322 122 32654	22nF 10% 63V
2163	4822 126 13473	220nF 80-20% 50V
2164	4822 126 14585	100nF 10% 50V
2165	4822 126 14585	100nF 10% 50V
2166	5322 122 32654	22nF 10% 63V
2167	5322 122 32448	10pF 5% 63V
2168	4822 126 13482	470nF 80/20% 16V
2169	4822 122 32535	680pF 10% 63V
2170	4822 122 32535	680pF 10% 63V
2173	4822 122 33177	10nF 20% 50V
2174	4822 126 13473	220nF 80-20% 50V
2175	4822 122 33575	220pF 5% 63V
2176	4822 122 33575	220pF 5% 63V
2178	5322 122 32654	22nF 10% 63V
2179	5322 122 32654	22nF 10% 63V
2180	5322 122 32654	22nF 10% 63V
2181	4822 126 13692	47pF 1% 63V
2182	4822 126 13692	47pF 1% 63V
2183	5322 122 32654	22nF 10% 63V
2185	4822 126 13692	47pF 1% 63V
2186	4822 126 13473	220nF 80-20% 50V
2188	4822 126 13692	47pF 1% 63V
2189	5322 122 31863	330pF 5% 63V

3100	4822 117 10837	100k 1% 0.1W
3101	4822 117 10837	100k 1% 0.1W
3102	4822 051 20392	3k9 5% 0.1W
3103	4822 051 20392	3k9 5% 0.1W
3104	4822 050 21303	13k 1% 0.6W
3105	4822 050 21303	13k 1% 0.6W
3106	4822 050 21303	13k 1% 0.6W
3107	4822 050 21303	13k 1% 0.6W
3108	4822 050 26492	6k49 1% 0.6W
3109	4822 050 26492	6k49 1% 0.6W
3110	4822 051 20184	180k 5% 0.1W
3111	4822 051 20184	180k 5% 0.1W
3112	4822 051 20223	22k 5% 0.1W
3113	4822 051 20223	22k 5% 0.1W
3114	4822 050 23303	33k 1% 0.6W
3115	4822 051 20333	33k 5% 0.1W
3116	4822 051 20333	33k 5% 0.1W
3117	4822 051 20333	33k 5% 0.1W
3118	4822 051 20273	27k 5% 0.1W
3119	4822 051 20273	27k 5% 0.1W
3120	4822 051 20273	27k 5% 0.1W
3121	4822 051 20273	27k 5% 0.1W
3122	4822 117 10834	47k 1% 0.1W
3123	4822 117 10834	47k 1% 0.1W
3124	4822 116 83933	15k 1% 0.1W
3125	4822 116 83933	15k 1% 0.1W
3126	4822 051 10102	1k 2% 0.25W
3127	4822 051 10102	1k 2% 0.25W
3128	4822 051 20332	3k3 5% 0.1W
3129	4822 051 20332	3k3 5% 0.1W
3130	4822 117 10833	10k 1% 0.1W
3131	4822 117 10833	10k 1% 0.1W
3132	4822 051 20683	68k 5% 0.1W
3133	4822 051 20683	68k 5% 0.1W
3134	4822 117 10965	18k 1% 0.1W
3135	4822 117 10965	18k 1% 0.1W
3136	4822 117 10965	18k 1% 0.1W
3137	4822 117 10965	18k 1% 0.1W
3138	4822 117 11507	6k8 1% 0.1W
3139	4822 117 11507	6k8 1% 0.1W
3140	4822 051 10102	1k 2% 0.25W
3141	4822 051 10102	1k 2% 0.25W
3142	4822 051 20474	470k 5% 0.1W
3143	4822 117 10837	100k 1% 0.1W
3144	4822 051 20333	33k 5% 0.1W
3145	4822 116 83933	15k 1% 0.1W
3150	4822 051 20333	33k 5% 0.1W
3151	4822 116 83933	15k 1% 0.1W
3152	4822 116 83933	15k 1% 0.1W
3153	4822 051 20333	33k 5% 0.1W
3154	4822 051 20822	8k2 5% 0.1W

3155	4822 051 20392	3k9 5% 0.1W
3156	4822 051 20822	8k2 5% 0.1W
3157	4822 100 11676	10k 30%LIN 0.2W
3158	4822 051 20471	470Ω 5% 0.1W
3159	4822 051 20471	470Ω 5% 0.1W
3160	4822 116 52175	100Ω 5% 0.5W
3161	4822 116 52175	100Ω 5% 0.5W
3162	4822 051 20008	0Ω jumper 0805
3165	4822 051 20008	0Ω jumper 0805
3168	4822 051 20332	3k3 5% 0.1W
3169	4822 117 10834	47k 1% 0.1W
3170	4822 051 20472	4k7 5% 0.1W
3171	4822 051 20391	390Ω 5% 0.1W
3172	4822 051 10102	1k 2% 0.25W
3175	4822 117 10837	100k 1% 0.1W
3176	4822 051 10102	1k 2% 0.25W
3177	4822 051 20223	22k 5% 0.1W
3180	4822 117 13579	220k 1% 0.1W 0805
3181	4822 117 13579	220k 1% 0.1W 0805
3182	4822 051 20474	470k 5% 0.1W
3184	4822 051 10102	1k 2% 0.25W
3185	4822 117 10833	10k 1% 0.1W
3188	4822 051 20472	4k7 5% 0.1W
3189	4822 117 10837	100k 1% 0.1W
3190	4822 051 20472	4k7 5% 0.1W
3191	4822 051 20223	22k 5% 0.1W
3193	4822 117 10834	47k 1% 0.1W
3194	4822 051 20008	0Ω jumper 0805
3196	4822 051 20472	4k7 5% 0.1W
3197	4822 051 20472	4k7 5% 0.1W
3198	4822 051 20008	0Ω jumper 0805
3199	4822 051 20561	560Ω 5% 0.1W
3199	4822 051 20562	5k6 5% 0.1W 0805
3200	4822 051 20472	4k7 5% 0.1W
3201	4822 051 20471	470Ω 5% 0.1W
3202	4822 051 20471	470Ω 5% 0.1W
3203	4822 051 10102	1k 2% 0.25W
3204	4822 051 10102	1k 2% 0.25W
3205	4822 051 10102	1k 2% 0.25W
3206	4822 051 20471	470Ω 5% 0.1W
3207	4822 117 10833	10k 1% 0.1W
4xxx	4822 051 10008	0Ω jumper 1206
4xxx	4822 051 20008	0Ω jumper 0805

5101	2422 543 01048	Crystal 12.8MHz
5102	2422 535 94915	33nH 5% 0805
5105	2422 535 94828	27nH 5% 0805
5107	4822 157 71206	Bead 100MHz 600Ω

6101	4822 130 34121	BAX18
6102	4822 130 61219	BZX79-B10
6106	4822 130 11423	PLVA2656A
6107	4822 130 83757	BAS216

7101	9322 137 78682	NJM2060D
7102	9338 436 90602	SA572N
7103	4822 209 70157	NJM4560DD
7105	3104 218 80310	µP S83C751-4N24
7106	4822 209 17338	L78L08ACZ
7108	4822 130 60373	BC856B
7109	4822 209 83357	NJM4560M
7110	4822 130 60511	BC847B
7112	9337 140 10653	74HC4060D
7113	4822 209 60792	74HC4053D
7114	4822 130 60511	BC847B
7115	4822 209 83357	NJM4560M
7116	4822 130 60511	BC847B
7117	4822 130 60373	BC856B
7118	4822 130 60511	BC847B
7119	4822 130 60511	BC847B

Wireless receiver [U]

Various

0438	3104 217 06050	Receiver 864MHz
0438	3104 217 06200	Receiver 433MHz
1701	4822 277 11671	Slide switch 1P 7pos
1710	3104 217 06260	Frontend 864MHz
1710	4822 218 11568	Frontend 433MHz

2701	5322 122 32654	22nF 10% 63V
2702	5322 122 32654	22nF 10% 63V
2703	4822 126 13751	47nF 10% 63V
2704	4822 126 13473	220nF 80-20% 50V
2705	4822 126 14585	100nF 10% 50V
2706	5322 122 32654	22nF 10% 63V
2707	4822 126 14585	100nF 10% 50V
2708	4822 124 40769	4.7µF 20% 100V
2709	5322 122 32531	100pF 5% 50V
2710	4822 126 13473	220nF 80-20% 50V
2711	4822 121 41854	150nF 5% 63V
2712	4822 126 13188	15nF 5% 63V
2713	2222 464 90014	180pF 2% 630V
2714	4822 124 41751	47µF 20% 50V
2715	4822 124 40769	4.7µF 20% 100V
2716	4822 126 13473	220nF 80-20% 50V
2717	5322 122 32654	22nF 10% 63V
2718	4822 126 13473	220nF 80-20% 50V
2719	4822 122 33216	270pF 5% 50V
2720	4822 122 33216	270pF 5% 50V
2721	4822 126 13473	220nF 80-20% 50V
2722	4822 126 14585	100nF 10% 50V
2723	4822 124 22652	2.2µF 20% 50V
2731	4822 124 22652	2.2µF 20% 50V
2741	4822 124 22652	2.2µF 20% 50V
2750	4822 126 13473	220nF 80-20% 50V
2751	5322 122 32531	100pF 5% 50V
2752	4822 126 13473	220nF 80-20% 50V
2753	5322 122 32654	22nF 10% 63V
2754	4822 124 40769	4.7µF 20% 100V
2755	5322 122 32654	22nF 10% 63V
2762	4822 126 13692	47pF 1% 63V
2770	4822 124 40769	4.7µF 20% 100V
2771	5322 122 32654	22nF 10% 63V
2772	4822 124 22652	2.2µF 20% 50V
2773	4822 124 22652	2.2µF 20% 50V
2774	4822 121 51319	1µF 10% 63V
2775	5322 122 32654	22nF 10% 63V
2776	4822 124 22652	2.2µF 20% 50V
2777	4822 124 22652	2.2µF 20% 50V
2778	4822 121 51319	1µF 10% 63V
2779	5322 122 32654	22nF 10% 63V
2780	4822 124 40248	10µF 20% 63V
2781	4822 124 40769	4.7µF 20% 100V
2782	5322 126 10223	4.7nF 10% 63V
2783	4822 124 22652	2.2µF 20% 50V
2786	4822 124 40248	10µF 20% 63V
2787	4822 124 40769	4.7µF 20% 100V
2788	5322 126 10223	4.7nF 10% 63V
2789	4822 124 22652	2.2µF 20% 50V
2790	4822 126 14585	100nF 10% 50V
2792	4822 122 33575	220pF 5% 63V
2793	4822 122 33575	220pF 5% 63V
2794	4822 122 33575	220pF 5% 63V

3701	4822 051 20471	470Ω 5% 0.1W
3702	4822 117 13577	330Ω 1% 0805 1.25W
3703	4822 117 11449	2k2 1% 0.1W
3704	4822 051 20471	470Ω 5% 0.1W
3705	4822 051 20101	100Ω 5% 0.1W
3706	4822 051 20332	3k3 5% 0.1W
3707	4822 117 13577	330Ω 1% 0805 1.25W
3708	4822 051 20478	4Ω7 5% 0.1W
3709	4822 117 11448	180Ω 1% 0.1W
3710	4822 051 20391	390Ω 5% 0.1W
3711	4822 100 12159	100k 30%
3712	4822 117 10833	10k 1% 0.1W
3713	4822 117 10833	10k 1% 0.1W
3714	4822 051 20223	22k 5% 0.1W
3715	4822 117 11148	56k 1% 0.1W
3716	4822 051 20332	3k3 5% 0.1W
3717	4822 116 52264	27k 5% 0.5W
3718	4822 116 52264	27k 5% 0.5W
3719	4822 117 10837	100k 1% 0.1W
3720	4822 117 10837	100k 1% 0.1W
3721	4822 051 20273	27k 5% 0.1W
3722	4822 051 20472	4k7 5% 0.1W
3723	4822 051 20273	27k 5% 0.1W
3723	4822 117 10965	18k 1% 0.1W
3724	4822 051 20393	39k 5% 0.1W
3724	4822 117 10837	100k 1% 0.1W
3726	4822 117 11449	2k2 1% 0.1W
3727	4822 051 20562	5k6 5% 0.1W 0805
3728	4822 051 20562	5k6 5% 0.1W 0805
3729	4822 051 20474	470k 5% 0.1W
3730	4822 051 20223	22k 5% 0.1W
3731	4822 051 20683	68k 5% 0.1W
3732	4822 051 20562	5k6 5% 0.1W 0805
3733	4822 051 20392	3k9 5% 0.1W
3734	4822 051 20561	560Ω 5% 0.1W
3735	4822 051 20391	390Ω 5% 0.1W
3736	2120 363 90145	22K 30% LIN
3737	4822 051 20472	4k7 5% 0.1W
3738	4822 051 20472	4k7 5% 0.1W
3739	4822 117 11449	2k2 1% 0.1W
3740	4822 051 20223	22k 5% 0.1W
3741	4822 117 11449	2k2 1% 0.1W
3742	4822 051 20562	5k6 5% 0.1W 0805
3743	4822 051 20392	3k9 5% 0.1W
3744	4822 051 20561	560Ω 5% 0.1W
3745	4822 051 20391	390Ω 5% 0.1W
3746	4822 051 20472	4k7 5% 0.1W
3747	4822 051 20101	100Ω 5% 0.1W
3748	4822 117 11449	2k2 1% 0.1W
3749	4822 117 11449	2k2 1% 0.1W
3750	4822 051 10102	1k 2% 0.25W
3751	4822 051 20472	4k7 5% 0.1W
3752	4822 051 20101	100Ω 5% 0.1W
3753	4822 117 10833	10k 1% 0.1W
3754	4822 117 10837	100k 1% 0.1W
3755	4822 117 10833	10k 1% 0.1W
3756	4822 117 10833	10k 1% 0.1W
3757	4822 117 10833	10k 1% 0.1W
3758	4822 117 10834	47k 1% 0.1W
3759	4822 117 10834	47k 1% 0.1W
3760	4822 051 20472	4k7 5% 0.1W
3761	4822 051 20101	100Ω 5% 0.1W
3762	4822 117 10833	10k 1% 0.1W
3763	4822 117 10833	10k 1% 0.1W
3771	4822 117 10833	10k 1% 0.1W
3772	4822 051 20332	3k3 5% 0.1W
3775	4822 117 10833	10k 1% 0.1W
3776	4822 051 20332	3k3 5% 0.1W
3778	4822 051 10102	1k 2% 0.25W
3779	4822 051 10102	1k 2% 0.25W
3780	4822 117 10837	100k 1% 0.1W
3781	4822 117 10965	18k 1% 0.1W
3782	4822 117 10834	47k 1% 0.1W
3783	4822 117 11449	2k2 1% 0.1W
3786	4822 117 10837	100k 1% 0.1W
3787	4822 117 10965	18k 1% 0.1W
3788	4822 117 10834	47k 1% 0.1W
3789	4822 117 11449	2k2 1% 0.1W
3792	4822 117 10837	100k 1% 0.1W
3793	4822 117 10837	100k 1% 0.1W
3794	4822 051 20472	4k7 5% 0.1W
3795	4822 117 10833	10k 1% 0.1W
3796	4822 051 20561	560Ω 5% 0.1W
3796	4822 051 20562	5k6 5% 0.1W 0805
4xxx	4822 051 10008	0Ω jumper 1206
4xxx	4822 051 20008	0Ω jumper 0805

5701	2422 549 43868	Coil var. 10.7MHz
5702	4822 157 11668	Filter MPX 20KHZ
5703	4822 157 11668	Filter MPX 20KHZ
5704	4822 242 72527	Crystal 4.00MHz
5705	4822 157 71206	Bead 100MHz 600Ω
5706	4822 242 70665	Filter SFE10.7MS3-A
5707	4822 242 70665	Filter SFE10.7MS3-A
5708	4822 157 11172	68nH 10% 0805

6701	5322 130 34331	BAV70
6702	4822 130 34233	BZX79-B5V1
6703	4822 130 83757	BAS216
6704	4822 130 30621	1N4148
6705	4822 130 30621	1N4148

7702	9350 394 00112	TDA1578A/V6
7703	4822 130 60373	BC856B
7704	4822 130 60511	BC847B
7705	4822 130 60511	BC847B
7706	4822 130 60511	BC847B
7707	5322 130 42718	BFS20
7708	3104 218 80290	µProcessor
7709	9338 436 90602	SA572N
7710	4822 209 70157	NJM4560DD
7711	4822 209 17338	L78L08ACZ
7712	4822 130 41327	BC327-40

7713	4822 130 60511	BC847B
7714	4822 209 15263	L78L06ACZ
7717	4822 130 60511	BC847B
7718	4822 130 60373	BC856B
7719	4822 130 60511	BC847B
7720	4822 130 60511	BC847B

Surround sound supply+amplifier [W1] [W2] [W3] [W4]

Various

0011	4303 308 76220	HOLDER LED DIST.ELB LU53-080
0012	9390 288 60112	Spring clip SOT93
0013	4822 413 31586	Power button
1101	4822 267 10748	S3B-EH (3P)
1201	2422 025 14044	CON BMT B6P-VH
1202	4822 265 30734	4 PINS
1203	4303 308 99380	CON BMT B2P(3-2)-VH
1204	4822 276 13224	Mains switch
1205	4822 265 11253	Fuse holder
1206	4822 070 32002	Fuse 2A
1301	2422 025 04849	CON BMT 2P
1302	4822 265 10872	YKD21-0178
1303	4822 265 30735	5P
1304	4822 267 10735	B3B-EH-A
1305	4822 265 41392	B7B-EH-A
1306	4822 267 31014	Socket headphone
1307	4303 308 94460	Slide switch 2P
1401	4822 265 30735	5P
1402	4822 267 10735	B3B-EH-A
1403	2422 025 04851	CON BMT 3P
1404	4822 267 10565	4P
1405	2422 025 10647	CON BMT B4P-VH 1P
1406	2422 025 04849	CON BMT 2P
1407	2422 025 04849	CON BMT 2P
1408	4822 071 52502	Fuse 2.5A
1409	4822 071 52502	Fuse 2.5A
8000	3139 110 30840	CABL AS 04EH/040P 180 BK24F
8002	4303 301 91570	CABL AS 7P PART. SHIELDED AC_3
8003	4303 301 91580	CABL AS 3P SHIELDED AC_3
8004	4303 301 00380	CABL AS 2P AWG-22 AC_3
8005	3139 110 30730	Cable 03EH/030P 280 3 BK 24F

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2201	4822 126 13838	100nF 80-20% 50V 0805
2202	4822 126 11958	2,2nF 10% 500V
2203	4822 126 13841	1nF 20% 250V
2204	4822 122 33127	2,2nF 10% 63V
2205	5322 121 42498	680nF 5% 63V
2206	3143 018 90900	100pF 10% 1KV
2207	2222 044 36478	4,7µF 20% 400V
2208	2222 336 20105	1µF 20 275V
2209	4822 124 12056	1000µF 20% 35V
2210	4822 124 40196	220µF 20% 16V
2211	4822 126 13838	100nF 80-20% 50V 0805
2301	4822 126 14043	1µF +80-20% 16V 0805
2302	4822 126 14043	1µF +80-20% 16V 0805
2303	4822 126 13751	47nF 10% 63V
2304	4822 126 13751	47nF 10% 63V
2401	4822 124 12056	1000µF 20% 35V
2402	4822 124 11912	220µF 20% 6,3V
2403	4822 124 11912	220µF 20% 6,3V
2404	4822 124 42367	3300µF 20% 35V
2405	4822 124 42367	3300µF 20% 35V
2406	4822 124 40769	4,7µF 20% 100V
2407	4822 124 40207	100µF 20% 25V
2408	4822 124 81151	22µF 50V
2409	4822 122 31947	100nF 20% 63V
2410	4822 122 31947	100nF 20% 63V
2411	4822 122 31947	100nF 20% 63V
2412	4822 122 31947	100nF 20% 63V
2413	4822 122 31947	100nF 20% 63V
2414	4822 122 31947	100nF 20% 63V
2415	4822 126 13473	220nF 80-20% 50V
2416	4822 126 13473	220nF 80-20% 50V
2420	5322 122 32268	470pF 10% 50V
2421	4822 126 13473	220nF 80-20% 50V
2422	4822 126 13473	220nF 80-20% 50V
2426	5322 122 32268	470PF 10% 50V
2427	4822 126 13473	220nF 80-20% 50V
2428	4822 126 13473	220nF 80-20% 50V
2429	5322 122 32531	100pF 5% 50V
2430	5322 122 32531	100pF 5% 50V
2431	4822 126 13473	220nF 80-20% 50V
2432	4822 126 13473	220nF 80-20% 50V
2433	5322 122 32654	22nF 10% 63V
2434	5322 122 32654	22nF 10% 63V
2435	5322 122 32531	100pF 5% 50V
2436	5322 122 32531	100pF 5% 50V
2437	4822 126 13838	100nF 80-20% 50V 0805
2438	4822 126 13838	100nF 80-20% 50V 0805
2439	4822 126 13838	100nF 80-20% 50V 0805
2440	4822 126 13838	100nF 80-20% 50V 0805
2441	4822 126 14043	1µF +80-20% 16V 0805
2442	4822 126 13473	220nF 80-20% 50V
2443	4822 126 13482	470nF 80/20% 16V
2444	4822 126 13691	27pF 1% 63V
2445	4822 126 13691	27pF 1% 63V
2446	4822 126 13473	220nF 80-20% 50V
2447	4822 126 13838	100nF 80-20% 50V 0805
2448	4822 126 13838	100nF 80-20% 50V 0805
2449	4822 126 13838	100nF 80-20% 50V 0805
2450	4822 126 13838	100nF 80-20% 50V 0805
2451	4822 126 13473	220nF 80-20% 50V
2452	5322 122 32531	100pF 5% 50V
2453	5322 122 32531	100pF 5% 50V
2454	5322 122 32531	100pF 5% 50V
2455	5322 122 32531	100pF 5% 50V
2456	4822 122 33127	2,2nF 10% 63V

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3201	4822 051 52702	2k70 1% 0,125W
3202	4822 053 21475	4M70 5% 0,5W
3203	4822 053 21225	2M20 5% 0,5W
3204	4822 051 52702	2k70 1% 0,125W
3205	4822 051 20121	120R00 5% 0,1W
3206	4822 117 11454	820Ω 1% 0,1W
3207	4822 053 20106	10M00 5% 0,25W
3208	4822 116 83883	470Ω 5% 0,5W
3209	4822 117 11449	2k2 1% 0,1W
3210	4822 117 11449	2k2 1% 0,1W
3211	4822 117 10833	10k 1% 0,1W
3212	4822 051 10472	4k70 2% 0,25W
3214	4822 117 10833	10k 1% 0,1W
3215	4822 116 52195	47Ω 5% 0,5W
3216	4822 116 52182	15Ω 5% 0,5W
3217	4822 116 52182	15Ω 5% 0,5W
3219	4822 052 10108	1Ω 5% 0,33W
3220	4822 052 10108	1Ω 5% 0,33W
3221	4822 052 10109	10Ω 5% 0,33W
3222	4822 052 10471	470Ω 5% 0,33W
3223	4822 051 20471	470Ω 5% 0,1W
3301	4822 116 83933	15k 1% 0,1W
3302	4822 116 83933	15k 1% 0,1W
3303	4822 117 11149	82k 1% 0,1W
3304	4822 117 11149	82k 1% 0,1W
3305	4822 051 20008	0Ω jumper 0805
3306	4822 051 20008	0Ω jumper 0805
3307	4822 051 20223	22k00 5% 0,1W
3308	4822 051 20223	22k00 5% 0,1W
3401	4822 050 23301	330Ω 1% 0,6W
3402	4822 050 23301	330Ω 1% 0,6W
3403	4822 050 23301	330Ω 1% 0,6W
3404	4822 050 23301	330Ω 1% 0,6W
3405	4822 117 11507	6k8 1% 0,1W
3406	4822 051 20822	8k20 5% 0,1W
3407	4822 051 20472	4k70 5% 0,1W
3409	4822 051 20008	0Ω jumper 0805
3410	4822 117 10833	10k 1% 0,1W
3411	4822 117 11507	6k8 1% 0,1W
3412	4822 051 20822	8k20 5% 0,1W
3413	4822 051 20472	4k70 5% 0,1W
3415	4822 051 20008	0Ω jumper 0805
3416	4822 117 10833	10k 1% 0,1W
3419	4822 116 83961	6k8 5%
3420	4822 117 10834	47k 1% 0,1W
3421	4822 117 10834	47k 1% 0,1W
3422	4822 051 20472	4k70 5% 0,1W
3423	4822 117 10834	47k 1% 0,1W
3424	4822 117 13579	220k 1% 0.1W 0805
3425	4822 050 21003	10k00 1% 0,6W
3426	4822 051 20334	330k00 5% 0,1W
3427	4822 117 10837	100k 1% 0.1W
3428	4822 117 10837	100k 1% 0.1W
3429	4822 117 10833	10k 1% 0,1W
3430	4822 117 10833	10k 1% 0,1W
3431	4822 117 10833	10k 1% 0,1W
3432	4822 051 20335	3M30 5% 0,1W
3433	4822 051 20474	470k00 5% 0,1W
3434	4822 117 11149	82k 1% 0,1W
3435	4822 051 20474	470k00 5% 0,1W
3436	4822 051 20223	22k00 5% 0,1W
3437	4822 051 20472	4k70 5% 0,1W
3438	4822 117 10833	10k 1% 0,1W
3439	4822 116 52195	47Ω 5% 0,5W
3440	4822 117 10834	47k 1% 0,1W
3441	4822 117 10834	47k 1% 0,1W
3442	4822 117 11449	2k2 1% 0,1W
3443	4822 051 20472	4k70 5% 0,1W
3444	4822 051 20562	5k6 5% 0,1W 0805
3445	4822 117 10833	10k 1% 0,1W
3446	4822 117 10833	10k 1% 0,1W
3447	4822 117 10833	10k 1% 0,1W
3448	4822 117 10837	100k 1% 0.1W
3449	4822 117 10833	10k 1% 0,1W
3450	4822 117 11449	2k2 1% 0,1W
3452	4822 052 10828	8.2Ω 5% 0,33W
3453	4822 052 10828	8.2Ω 5% 0,33W
3458	4822 051 20472	4k70 5% 0,1W
3459	4822 051 20472	4k70 5% 0,1W
3460	4822 117 10833	10k 1% 0,1W
3461	4822 051 20102	1k00 5% 0,1W
3462	4822 051 20102	1k00 5% 0,1W
4xxx	4822 051 10008	0Ω jumper 1206
4xxx	4822 051 20008	0Ω jumper 0805

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5201	4303 308 75810	COIL MAN TLF12UA 303 WO R4
5202	2422 535 97353	COIL FIX UIA 680 MU PM10 LAL04
5203	2422 535 97353	COIL FIX UIA 680 MU PM10 LAL04
5204	3128 138 38610	Standby transf.
5205	4822 157 70436	8,2µH
5206	4303 308 75820	Relay MAN JW1AFSN-B-DC12V

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6101	9337 175 71682	TLSV5100
6201	4822 130 31878	1N4003G
6202	5322 130 31938	BYV27-200
6203	4822 130 83338	LL4148
6204	4822 130 83338	LL4148
6205	4822 130 83338	LL4148
6206	4822 130 83147	DF06M
6207	9338 872 80673	BZX55-F22
6208	4822 130 34281	BZX79-B15
6209	4822 130 30842	BAV21
6210	4822 130 83338	LL4148
6211	4822 130 11421	BT151X-500R
6212	9339 530 90685	TZM-C20
6401	4822 130 30862	BZX79-B9V1
6402	4822 130 30862	BZX79-B9V1
6403	4822 130 34278	BZX79-B6V8
6404	4822 130 34173	BZX79-B5V6
6405	4822 130 31878	1N4003G
6406	4822 130 31878	1N4003G
6407	4822 130 31878	1N4003G
6408	4822 130 31878	1N4003G
6409	4822 130 31878	1N4003G
6410	4822 130 31878	1N4003G
6411	4822 130 31878	1N4003G
6412	4822 130 31878	1N4003G
6413	4822 130 31878	1N4003G
6414	4822 130 31878	1N4003G
6415	4822 130 31878	1N4003G
6416	4822 130 31878	1N4003G
6417	4822 130 31878	1N4003G
6418	4822 130 31878	1N4003G
6421	4822 130 83338	LL4148
6422	4822 130 83338	LL4148
6423	4822 130 83338	LL4148
6424	4822 130 83338	LL4148
6425	4822 130 83338	LL4148
6426	4822 130 83338	LL4148
6427	4822 130 83338	LL4148
6428	4822 130 30621	1N4148
6429	4822 130 83338	LL4148
6430	4822 130 83338	LL4148
6431	4822 130 83338	LL4148
6432	4822 130 83338	LL4148
6433	4822 130 83338	LL4148
6434	4822 130 31878	1N4003G
6436	4822 130 31878	1N4003G
6437	4822 130 30621	1N4148

7201	4822 209 15867	L4940V12
7203	4822 130 11418	TCDT1102G
7204	4822 130 44568	BC557B
7205	4822 130 60511	BC847B
7206	4822 130 44503	BC547C
7207	4822 130 11417	STP3NB60FP
7401	4822 209 32641	TDA2616Q
7402	4822 209 30095	LM833D
7403	4822 209 30095	LM833D
7404	5322 209 82941	LM358D
7405	5322 209 70225	LM393D
7410	4822 130 60373	BC857B
7411	4822 130 60373	BC857B
7412	4822 130 60511	BC847B
7413	4822 130 60511	BC847B
7414	4822 130 40981	BC337-25
7415	4822 130 60511	BC847B
7416	4822 130 60511	BC847B
7417	4822 130 60511	BC847B